
Massachusetts Births 2013



Massachusetts Department of Public Health
Office of Data Management and Outcomes Assessment

December, 2014

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Introduction

In order to meet the needs of our many stakeholders and to deliver timelier data, the 2013 Massachusetts Birth report has a new more compact format. In contrast to recent reports, this report contains a brief summary of births in Massachusetts. The report also includes comparisons to recent years with important trends being noted. Finally, six special topics have been selected for deeper discussion: Changing Demographics, Oral Health, Gestational Diabetes and Obesity, Smoking During Pregnancy, Cesarean Deliveries and Breastfeeding. In addition, a separate report on [Teen Births](#) was released earlier this month and another on Infant Mortality will be released later this fall.

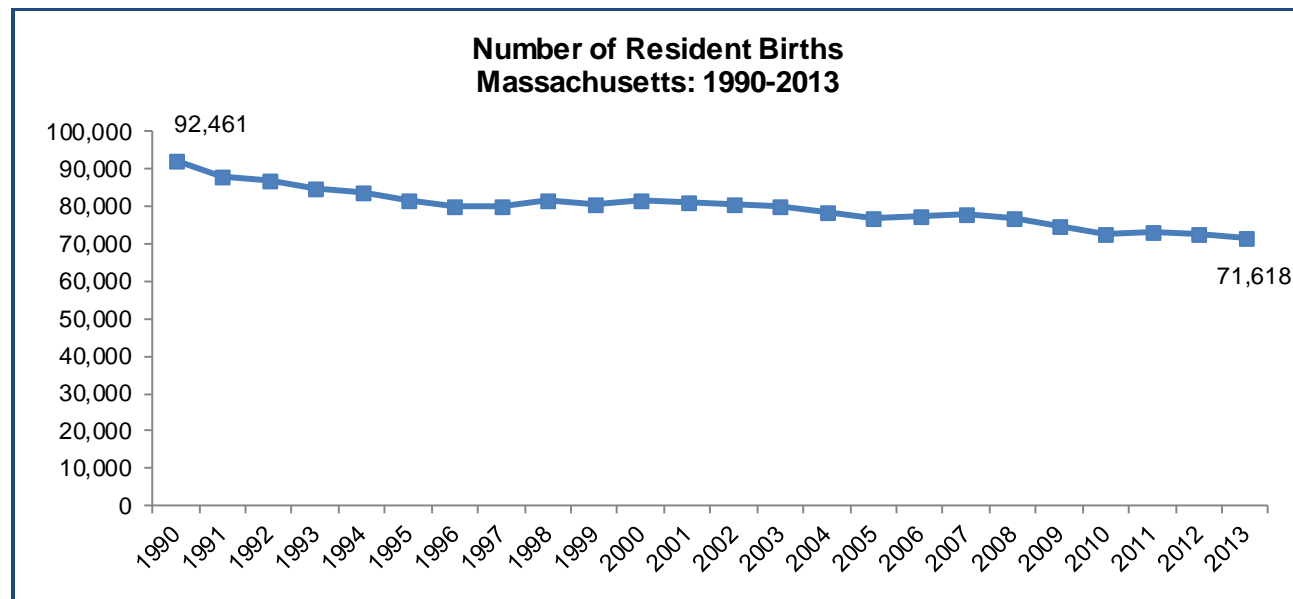
The intent of presenting these data in a new format is to make these data available to decision-makers and the public as quickly as possible. By simplifying the report and focusing on specific highlights, this report and future reports can be delivered more quickly.

Special Topics

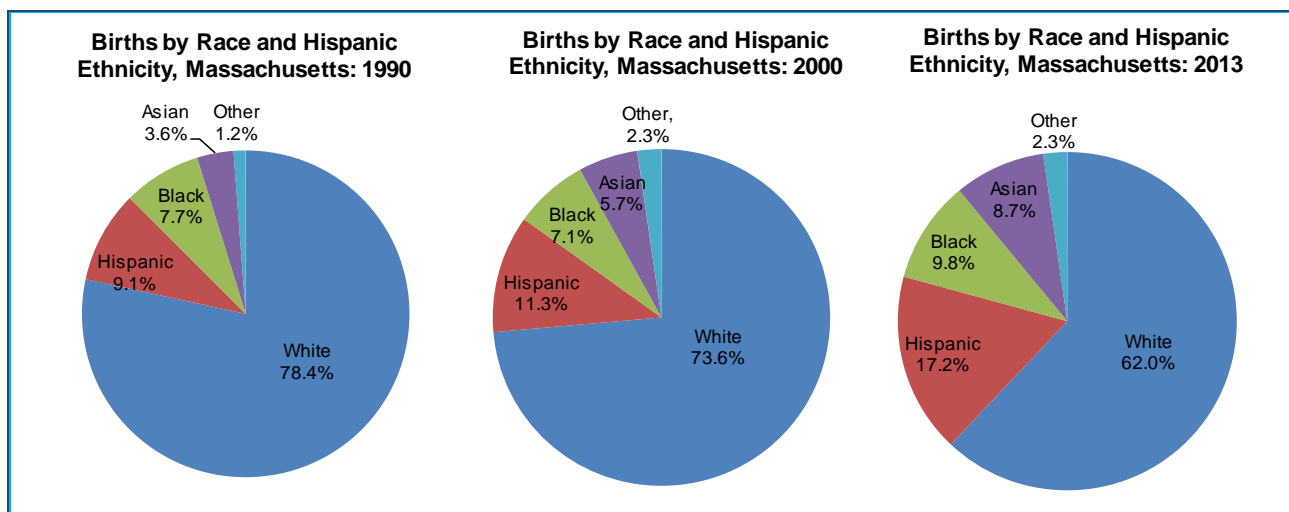
Changing Demographics

In 2013, there were 71,618 births to Massachusetts resident mothers, a decline of 1% from 72,457 in 2012 and a decline of 23% since 1990. In 2013, the number of mothers under the age of 30 declined by 6% (32,069 to 30,287) whereas the number of mothers ages 30 and older increased by 2% from 2012 (40,387 to 41,331).

The birth rate among women of reproductive age (defined as the number of births per 1,000 females ages 15-44 years) declined by 15% between 1990 and 2013 and by 1% from 2012. Births to women ages 25-34 years accounted for 59% of all births in 2013. Birth rates declined among teens aged 15-19 years by 15% and among mothers aged 20-24 years by 9% from 2012. Birth rates increased among mothers aged 30-34 years by 3% from 2012. Rates were unchanged among the other age groups.



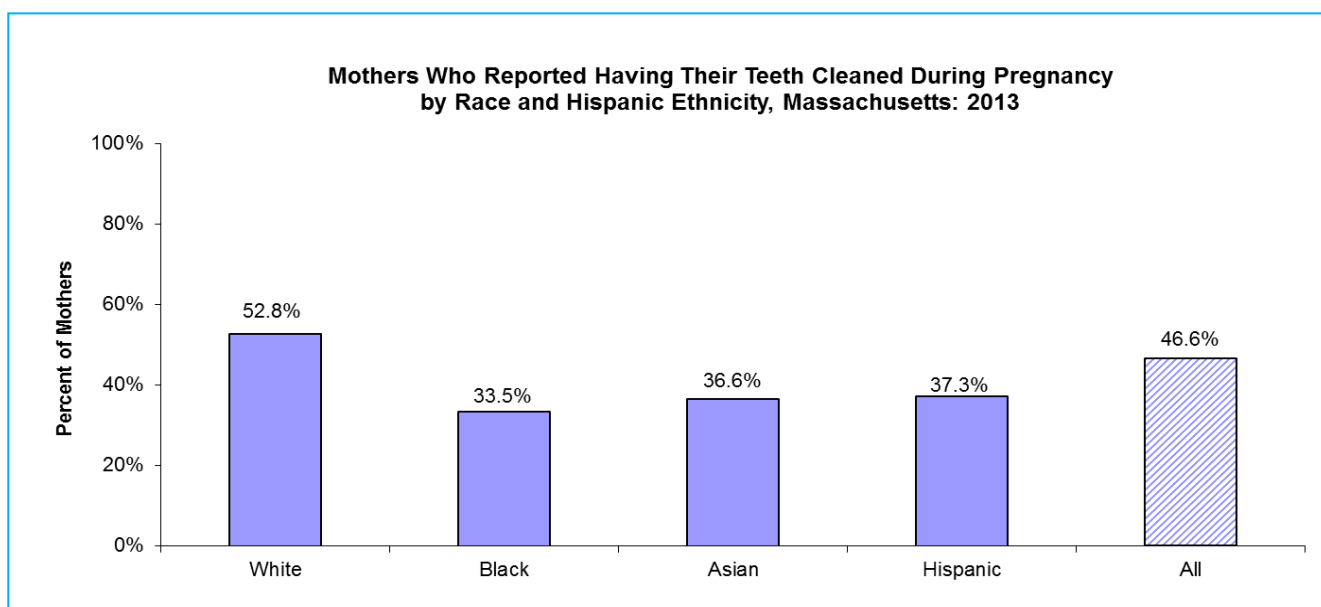
Whites still represent the single largest share of all births, at 62.0%, but this percentage has declined by 16% since 2000 and by 21% since 1990. In 2013, the percentage of births to Asian, Hispanic, and Black mothers remained stable compared to the 2012 figures. However, these percentages have increased since 1990 by 141%, 89%, and 27%, respectively.



In 2013, more than one out of every four births in Massachusetts was to a non-US-born mother (28.2%). The majority of Asian and Hispanic mothers have always been foreign born, but since 2008, Black foreign-born mothers account for the majority of Black mothers. While the percent of foreign-born White mothers has been declining by 4.6% per year since 2008, the percent of foreign-born Black mothers has been increasing by 1.8% per year since 2000.

Oral Health

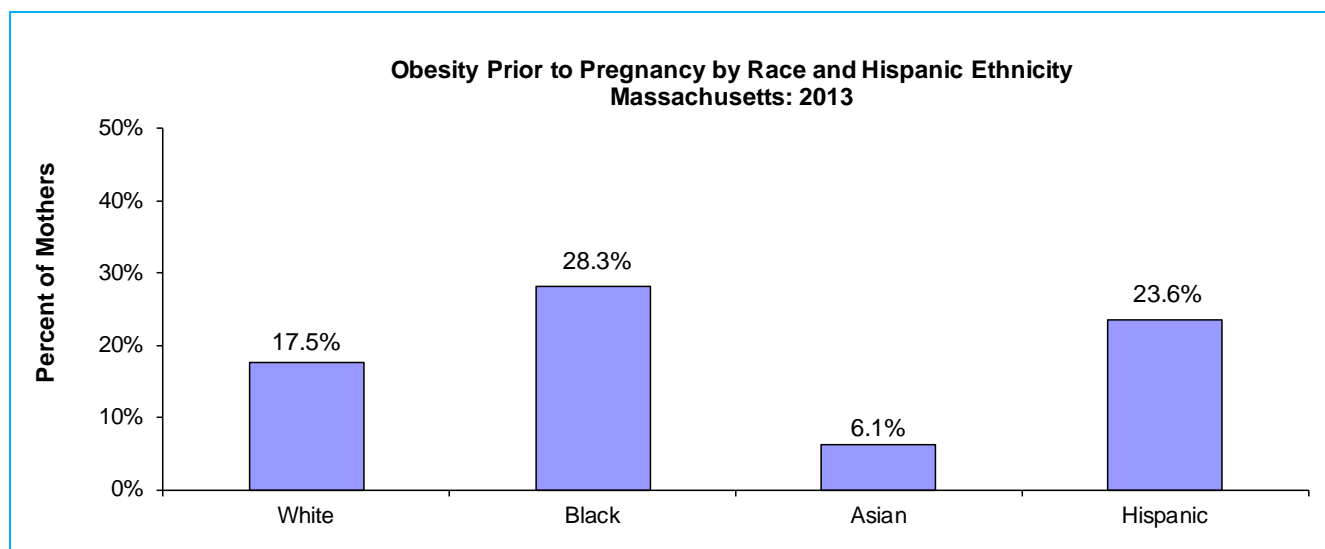
Improving oral health in the US has received increasing attention over the past decade and was included as one of the Healthy People 2020 goals. Pregnancy can alter or complicate oral health in women, which can lead to adverse pregnancy outcomes and potentially poor oral health in children. In 2013, the percentage of mothers who had their teeth cleaned by a dentist or dental hygienist during their pregnancies was 46.6%, similar to the figure of 46.1% in 2012. The percentage of mothers receiving oral health care during pregnancy was lowest among Black mothers (33.5%) followed by Asian (36.6%), and Hispanic (37.3%) mothers compared with White mothers (52.8%). Compared with 2012, Black mothers experienced an 8.2% increase in the percentage reporting having their teeth cleaned by a dentist or a dental hygienist during pregnancy (33.5% vs. 30.9%).



Gestational Diabetes and Obesity

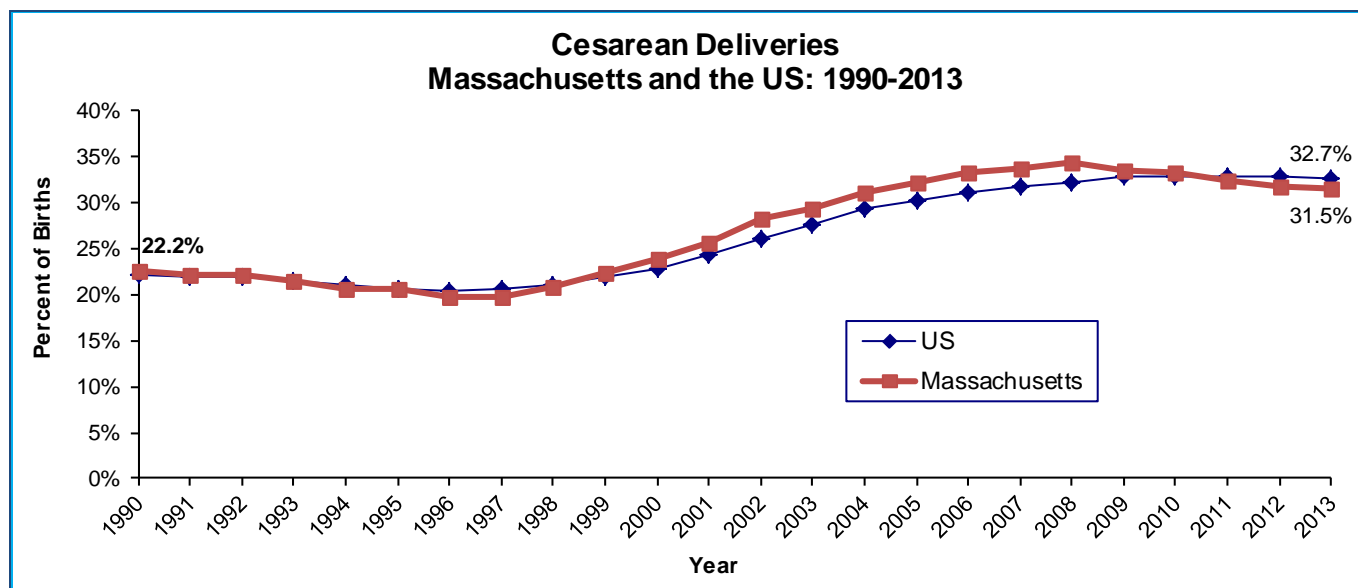
In 2013, the prevalence of gestational diabetes mellitus (GDM) was 5.3%, which was comparable to the figure of 5.6% for 2012. Asian mothers continued to have the highest prevalence of GDM (9.7%), while White mothers had the lowest (4.7%). Looking at decade long trends, the prevalence of GDM has been increasing by 5.3% per year since 2000.

In 2013, more than half of mothers (53.1%) had a normal body mass index (BMI) prior to becoming pregnant. About 3.9% of mothers were underweight, 24.5% overweight and 18.6% were obese. Asian (6.1%) and White (17.5%) mothers were less likely to be obese than Black (28.3%) and Hispanic mothers (23.6%).



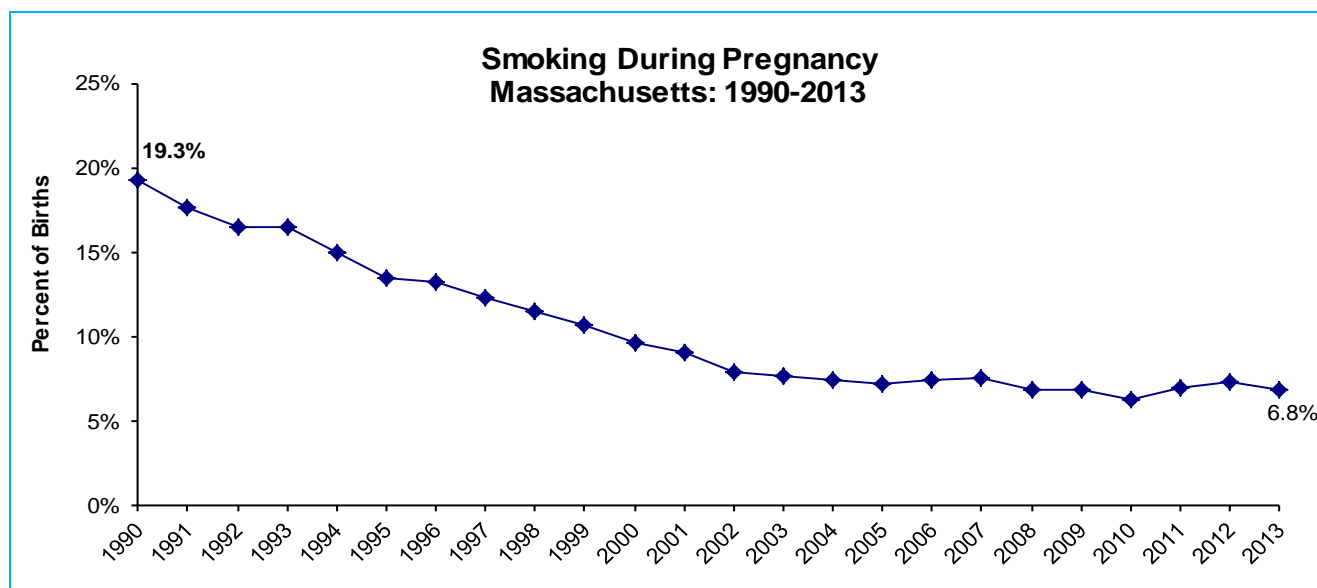
Cesarean Sections

In 2013, the cesarean delivery rate was 31.5% comparable with the 2012 figure of 31.7% but 4% lower than the percentage for the US (31.5% vs. 32.7%). Over the past decade, the cesarean delivery rate increased by 3.9% per year from 2003 to 2007 and has been declining by 1.5% per year since 2007. Yet, disparities by race and Hispanic ethnicity persist. Asian and Hispanic mothers continue to have the lowest cesarean delivery rates (30.4% and 30.3%, respectively), while Black mothers continue to have the highest rate (34.2%).



Smoking During Pregnancy

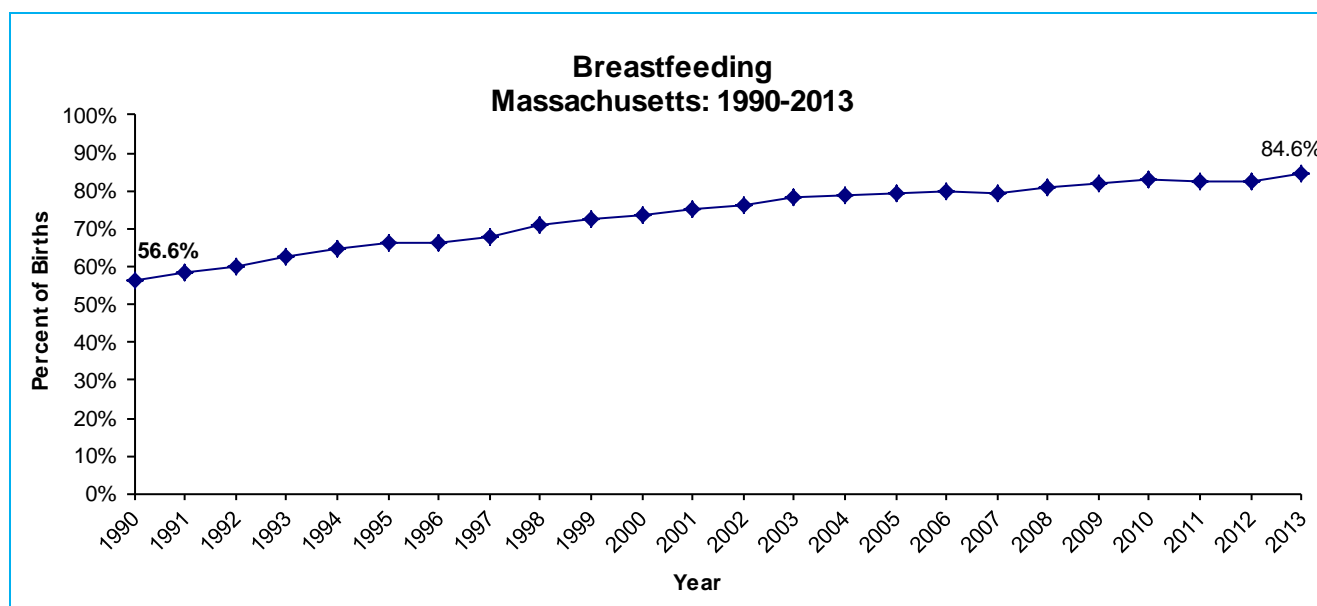
In 2013, the percent of mothers who reported smoking during pregnancy declined by 7% in the state, compared to 2012 (6.8% vs. 7.4%). A similar decline (7%) was seen during the same period among White mothers (8.6% vs. 9.2%). Beginning in 2011, the birth certificate included three questions on the amount of cigarettes smoked during each trimester – instead of one question about smoking during the entire pregnancy. This change in wording encourages the respondent to be thoughtful about how much cigarette smoking behavior occurred and may have resulted in better recall and thus a higher rate of reported smoking.



Starting with 2012 births data, information on 3rd trimester smoking has been collected. In 2013, the percentage of smoking during the 3rd trimester was 4.9%, an 11% decrease from the 2012 figure of 5.5%.

Breastfeeding

In 2013, the percentage of mothers who breastfed or intended to breastfeed at the time of discharge reached a record high of 84.6%, a 2% increase from 2012 which was driven by a 3% increase among White mothers (84.1% vs. 81.6%). This proportion was highest among Asian mothers (88.7%) and Black mothers (86.5%) and lowest among White mothers (84.1%) and Hispanic mothers (83.2%).



There is great variation in the percentage of mothers who breastfed or intended to breastfeed by education. In 2013, as in previous years, this proportion was highest among mothers with post-graduate and college educational attainment (94.5% and 92.0%, respectively) and was lowest among mothers who did not complete high school (71.4%).

Table 1. Trends in Birth Characteristics, Massachusetts: 1990, 1999-2013

Characteristic		1990	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Births ¹	n ²	92,461	80,866	81,582	81,014	80,624	80,167	78,460	76,824	77,670	77,934	76,969	74,966	72,835	73,169	72,457	71,618
	Rate ³	62.1	55.9	57.1	56.6	56.8	56.8	56.2	55.6	56.9	57.2	56.5	55.1	53.7	54.1	53.3	52.5
Race of Mother																	
White non-Hispanic	n	72,483	60,402	60,051	59,115	58,136	57,604	55,322	53,469	52,975	52,620	51,760	49,759	48,466	45,973	45,032	44,432
	% ⁴	78.4	74.7	73.6	73.0	72.1	71.9	70.5	69.6	68.2	67.5	67.2	66.4	66.5	62.8	62.1	62.0
Black non-Hispanic	n	7,158	5,844	5,755	5,862	5,948	5,902	6,053	6,077	6,452	6,462	6,652	6,945	6,794	6,999	6,892	7,016
	% ⁴	7.7	7.2	7.1	7.2	7.4	7.4	7.7	7.9	8.3	8.3	8.6	9.3	9.3	9.6	9.5	9.8
Asian	n	3,349	4,138	4,667	4,784	5,300	5,224	5,454	5,251	5,469	5,758	5,958	5,939	5,817	6,022	6,530	6,220
	% ⁴	3.6	5.2	5.7	5.9	6.6	6.5	7.0	6.8	7.0	7.4	7.7	7.9	8.0	8.2	9.0	8.7
Hispanic	n	8,406	8,815	9,247	9,410	9,543	9,764	9,798	10,061	10,696	10,861	10,895	10,986	10,588	12,777	13,088	12,315
	% ⁴	9.1	10.9	11.3	11.6	11.8	12.2	12.5	13.1	13.8	13.9	14.2	14.7	14.5	17.5	18.1	17.2
Teen Births (Ages 15-19)	n	7,258	5,515	5,305	4,979	4,642	4,639	4,559	4,539	4,722	4,944	4,583	4,477	3,907	3,480	3,219	2,732
	Rate ³	35.4	26.7	25.9	24.9	23.3	23.0	22.2	21.7	21.3	22.0	20.1	19.5	17.1	15.4	14.0	12.0
Births to Unmarried	n	22,837	21,448	21,621	21,620	21,604	22,262	22,376	23,170	24,977	26,010	26,146	26,029	25,220	25,349	24,900	24,014
	%	24.7	26.5	26.5	26.7	26.8	27.8	28.5	30.2	32.2	33.4	34.0	34.7	34.6	34.8	34.5	33.7
Cesarean Deliveries	n	20,615	18,080	19,086	20,639	22,553	23,392	24,295	24,732	25,901	26,240	26,240	25,067	24,244	23,062	22,900	22,508
	%	22.3	22.4	23.4	25.5	28.0	29.2	31.0	32.3	33.4	33.7	34.3	33.6	33.3	32.5	31.7	31.5
Gestational Diabetes ⁵	n			2,245	2,402	2,633	2,693	2,741	2,666	2,925	3,279	3,086	3,445	3,368	3,698	4,070	3,784
	%			2.8	3.0	3.3	3.4	3.5	3.5	3.8	4.2	4.0	4.7	4.7	5.1	5.6	5.3
Low Birthweight ⁶	n	5,388	5,708	5,711	5,795	6,060	6,115	6,125	6,073	6,150	6,147	5,955	5,804	5,650	5,458	5,491	5,495
	%	5.8	7.1	7.1	7.2	7.5	7.6	7.8	7.9	7.9	7.9	7.8	7.8	7.8	7.6	7.6	7.7
Preterm ⁷	n	5,899	6,136	6,582	6,412	6,795	6,963	7,222	6,925	6,954	6,980	6,750	6,516	6,234	5,992	6,107	6,300
	%	6.5	7.6	8.3	8.0	8.5	8.7	9.2	9.0	9.0	9.0	8.8	8.7	8.6	8.4	8.6	8.8
Late Preterm ⁸	n	3,977	4,153	4,509	4,428	4,726	4,800	5,016	4,808	4,918	4,945	4,753	4,602	4,361	4,206	4,422	4,518
	%	4.4	5.2	5.7	5.5	5.9	6.0	6.4	6.3	6.3	6.4	6.2	6.2	6.0	5.9	6.2	6.3
Prenatal Care																	
Public Pay Prenatal Care ⁹	%	25.1	26.1	26.5	27.2	27.9	28.3	29.9	31.9	33.5	34.9	34.5	35.3	35.8	38.8	39.8	38.9
APNCU Index ¹⁰	%		82.9	83.3	85.2	84.7	84.5	84.2	84.0	83.1	82.8	82.1	84.3	84.9	82.8	83.4	83.7
Adjusted APNCU Index ¹¹	%														85.3	85.4	84.5

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Births presented in all tables are resident live births unless otherwise specified. 2. Differences in numbers of births from previous publications are the result of updated files. 3. Birth rates represent the total number of births to women ages 15-44 years per 1,000 females ages 15-44; teen birth rates refer to number of births per 1,000 females ages 15-19. 4. Percentages are calculated based on births, including those to mothers of unknown race. 5. Gestational diabetes is defined as glucose intolerance found for the first time during pregnancy. It excludes cases with known pre-existing diabetes. 6. Low birthweight: less than 2,500 grams or 5.5 pounds. 7. Preterm: <37 weeks gestation. 8. Late preterm: 34-36 weeks of gestation. 9. Government programs including Commonwealth, Healthy Start, Medicaid/MassHealth, and Medicare (may also be HMO or managed care), or free care; other: Worker's Compensation and other sources. 10. Beginning with Births 2001, the APNCU Index has replaced the Kessner Index as the standard measurement of adequacy of prenatal care. 11. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems.

Table 2. Birth Characteristics by Maternal Race/Hispanic Ethnicity and Birthplace, Massachusetts: 2013

Race and Hispanic Ethnicity (by mother's birthplace)	Births		Teen Births				Birthweight				Prenatal Care				Cesarean Deliveries		Breastfeeding ⁵	
	n	% ¹	<18 Years		<20 Years		Very Low ²		Low ³		Adequate ⁴		1 st Trimester		n	%	n	%
State Total	71,618	100.0	765	1.1	2,766	3.9	937	1.3	5,495	7.7	48,811	84.5	55,829	82.5	22,508	31.5	58,922	84.6
US inc. DC	49,680	69.4	573	1.2	2,094	4.2	617	1.2	3,774	7.6	34,284	86.2	40,040	84.7	15,562	31.4	39,369	81.9
US Territories ⁷	1,732	2.4	74	4.3	236	13.6	24	1.4	176	10.2	1,256	82.0	1,297	77.5	527	30.5	1,313	77.0
Non-US-born ⁸	20,194	28.2	118	0.6	435	2.2	295	1.5	1,541	7.6	13,267	80.6	14,486	77.5	6,414	31.8	18,236	91.8
White Non-Hispanic	44,432	62.0	229	0.5	981	2.2	500	1.1	3,104	7.0	30,743	87.2	36,519	86.0	14,197	32.0	36,184	84.1
US inc. DC	39,644	89.2	221	0.6	950	2.4	438	1.1	2,793	7.1	27,451	87.6	32,817	86.5	12,728	32.2	31,800	83.0
US Territories ⁷	15	0.0	2	-- ⁶	3	-- ⁶	0	0.0	0	0.0	11	91.7	12	80.0	3	-- ⁶	13	86.7
Non-US-born ⁸	4,769	10.7	6	0.1	28	0.6	62	1.3	311	6.5	3,279	84.0	3,688	81.8	1,464	30.8	4,370	93.2
Black non-Hispanic	7,016	9.8	101	1.4	369	5.3	168	2.4	760	10.9	4,449	75.5	4,596	72.0	2,394	34.2	5,963	86.4
US inc. DC	3,059	43.6	77	2.5	286	9.3	77	2.5	380	12.5	2,076	79.2	2,135	76.7	939	30.8	2,350	78.5
US Territories ⁷	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	-- ⁶	2	-- ⁶	1	-- ⁶	1	-- ⁶
Non-US-born ⁸	3,953	56.3	24	0.6	83	2.1	91	2.3	380	9.6	2,372	72.5	2,459	68.4	1,454	36.9	3,610	92.5
Hispanic	12,315	17.2	403	3.3	1,296	10.5	173	1.4	1,009	8.2	8,399	80.3	8,805	76.6	3,622	29.4	10,112	83.2
US inc. DC	4,867	39.5	249	5.1	769	15.8	71	1.5	428	8.8	3,384	80.7	3,561	76.6	1,354	27.8	3,624	75.5
US Territories ⁷	1,704	13.8	72	4.2	232	13.6	24	1.4	176	10.4	1,237	81.9	1,276	77.5	522	30.7	1,291	76.8
Non-US-born ⁸	5,744	46.6	82	1.4	295	5.1	78	1.4	405	7.1	3,778	79.5	3,968	76.4	1,746	30.4	5,197	91.6
Asian	6,220	8.7	16	0.3	67	1.1	70	1.1	494	7.9	4,255	86.5	4,903	82.8	1,820	29.3	5,430	88.7
US inc. DC	1,171	18.8	13	1.1	56	4.8	16	1.4	101	8.6	820	87.5	939	84.5	277	23.7	948	82.4
US Territories ⁷	5	0.1	0	0.0	1	-- ⁶	0	0.0	0	0.0	4	-- ⁶	4	-- ⁶	0	0.0	5	100.0
Non-US-born ⁸	5,044	81.1	3	-- ⁶	10	0.2	54	1.1	393	7.8	3,431	86.3	3,960	82.4	1,543	30.6	4,477	90.1
American Indian⁹	238	0.3	6	2.5	17	7.1	2	--⁶	15	6.3	166	79.0	181	76.4	69	29.0	166	71.2
US inc. DC	232	97.5	6	2.6	16	6.9	2	-- ⁶	14	6.0	163	79.5	178	77.1	68	29.3	161	70.9
US Territories ⁷	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Non-US-born ⁸	6	2.5	0	0.0	1	-- ⁶	0	0.0	1	-- ⁶	3	-- ⁶	3	-- ⁶	1	-- ⁶	5	83.3
Other¹⁰	518	0.7	5	1.0	15	2.9	7	1.4	39	7.5	337	75.2	334	69.7	170	32.8	433	88.5
US inc. DC	110	21.2	2	-- ⁶	3	-- ⁶	1	-- ⁶	9	8.2	81	80.2	78	74.3	29	26.4	78	77.2
US Territories ⁷	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Non-US-born ⁸	408	78.8	3	-- ⁶	12	2.9	6	1.5	30	7.4	256	73.8	256	68.4	141	34.6	355	91.5
Unknown	879	1.2	5	0.6	21	2.4	17	2.2	74	9.7	462	79.1	491	73.2	236	31.1	634	87.6

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the column "Births %," the percentages of the race/Hispanic groups (bolded) are based on the state total (including births of unknown race/ethnicity), and the birthplace percents for the race/ethnicities are based on the total number in race/Hispanic ethnicity category. For all other categories, percentages are based on row totals. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low birthweight: less than 2,500 grams or 5.5 pounds. 4. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 5. Infant was being breastfed at time of discharge. 6. Calculations based on 1-4 events are excluded. 7. The category "US Territories" includes women born in Puerto Rico, the US Virgin Islands, and Guam. Approximately 95% of the births in this category were to women born in Puerto Rico. 8. The category "Non-US-born" includes women born outside of the 50 US states, District of Columbia, and the US territories. 9. Mothers who selected American Indian as their race. 10. Mothers who indicated "Other" as their race.

Table 3. Birth Characteristics by Maternal Ancestry, Massachusetts: 2013

Maternal Ancestry	Births ¹		Teen Births				Low Birthweight ²		Prenatal Care				Late Preterm ⁴		Cesarean Section		Breast-feeding ⁵		Gestational Diabetes ⁶	
			<18 years		<20 Years				Adequate ³		1 st Trimester									
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
State Total	71,618	100.0	765	1.1	2,766	3.9	5,495	7.7	48,811	84.5	55,829	82.5	4,518	6.3	22,508	31.5	58,922	84.6	3,784	5.3
American	35,899	50.1	310	0.9	1,151	3.2	2,512	7.0	24,947	87.2	29,642	86.0	2,245	6.3	11,379	31.7	29,222	82.2	1,696	4.7
European	8,814	12.3	25	0.3	102	1.2	570	6.5	5,735	88.4	7,299	87.3	536	6.1	2,711	30.8	7,838	90.5	372	4.2
Puerto Rican	4,654	6.5	235	5.0	731	15.7	439	9.5	3,323	80.3	3,444	76.4	321	6.9	1,362	29.3	3,337	72.6	273	5.9
African American	3,230	4.5	75	2.3	267	8.3	393	12.2	2,148	78.6	2,198	75.4	260	8.1	1,025	31.8	2,485	78.4	154	4.8
Dominican	2,619	3.7	73	2.8	250	9.5	209	8.0	1,806	78.8	1,868	77.1	173	6.6	857	32.8	2,308	89.1	126	4.8
Other	2,386	3.3	8	0.3	58	2.4	254	10.7	1,712	85.0	1,750	80.6	171	7.2	774	32.9	1,201	86.3	92	3.9
Portuguese	2,074	2.9	31	1.5	118	5.7	158	7.6	1,591	83.9	1,668	81.9	121	5.8	747	36.0	1,381	67.3	138	6.7
Asian Indian	1,922	2.7	2	-- ⁷	3	-- ⁷	178	9.3	1,197	89.5	1,594	86.5	107	5.6	700	36.5	1,839	97.6	203	10.6
African	1,828	2.6	6	0.3	25	1.4	167	9.2	1,127	75.7	1,182	69.0	110	6.0	678	37.2	1,664	92.0	120	6.6
Chinese	1,787	2.5	2	-- ⁷	9	0.5	105	5.9	1,317	90.0	1,501	88.1	85	4.8	447	25.1	1,610	91.2	161	9.0
Brazilian	1,569	2.2	9	0.6	40	2.5	89	5.7	1,113	85.5	1,256	83.0	75	4.8	651	41.5	1,476	95.0	95	6.1
Haitian	1,372	1.9	9	0.7	30	2.2	141	10.3	807	69.0	812	65.7	97	7.1	502	36.6	1,248	92.0	91	6.6
Cape Verdean	1,208	1.7	36	3.0	97	8.0	108	9.0	837	75.3	829	73.2	80	6.6	380	31.5	1,016	85.4	54	4.5
Middle Eastern	1,143	1.6	3	-- ⁷	8	0.7	93	8.2	678	73.1	797	74.9	60	5.3	367	32.1	1,038	91.7	66	5.8
Salvadoran	1,114	1.6	28	2.5	107	9.6	79	7.1	680	81.8	710	77.0	75	6.7	241	21.6	978	88.7	70	6.3
Guatemalan	869	1.2	13	1.5	52	6.0	61	7.0	595	79.5	555	68.5	53	6.1	201	23.1	768	89.4	54	6.2
Russian	675	0.9	0	0.0	8	1.2	24	3.6	456	85.1	538	83.4	27	4.0	164	24.3	629	93.7	33	4.9
Vietnamese	656	0.9	3	-- ⁷	12	1.8	44	6.7	438	85.0	497	82.7	39	6.0	198	30.2	518	80.4	64	9.8
Cambodian	638	0.9	7	1.1	36	5.6	72	11.3	475	79.4	414	66.7	45	7.1	145	22.7	352	55.9	80	12.5
Mexican	567	0.8	5	0.9	29	5.1	32	5.7	361	77.3	399	73.8	25	4.4	151	26.7	492	88.5	32	5.7
West Indian Caribbean	485	0.7	4	-- ⁷	24	4.9	61	12.7	321	80.7	344	76.3	38	7.9	142	29.4	435	91.0	18	3.7
Other South American	460	0.6	5	1.1	15	3.3	26	5.7	316	80.4	343	76.9	31	6.7	152	33.1	432	94.5	11	2.4
Native Americans	436	0.6	8	1.8	39	8.9	24	5.5	309	82.4	319	74.7	29	6.7	117	26.8	332	77.2	28	6.4
Colombian	393	0.5	6	1.5	16	4.1	27	6.9	277	87.4	301	85.5	18	4.6	116	29.5	347	90.4	11	2.8
Korean	384	0.5	0	0.0	3	-- ⁷	20	5.2	256	85.9	300	84.0	18	4.7	93	24.2	365	96.1	35	9.1

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Since 2009, certain ancestry groups were combined: Lebanese, Iranian, Israeli, and Other Middle Eastern ancestries were combined into "Middle Eastern"; and Nigerian and Other African were combined into "African." 1. In the column "Births," percentages are based on column total (state total of births, including births for which maternal ethnicity is unknown and other). For all other categories, percentages are based on row totals. 2. Low birthweight: less than 2,500 grams or 5.5 pounds. 3. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 4. Late preterm: 34-36 weeks gestation. 5. Infant was being breastfed at time of discharge. 6. Gestational diabetes is defined as glucose intolerance found during pregnancy for the first time. It excludes cases with pre-existing diabetes. 7. Calculations based on 1-4 events are excluded.

Figure 1. Trends in the Number of Births by Mother's Age Group, Massachusetts: 1980-2013

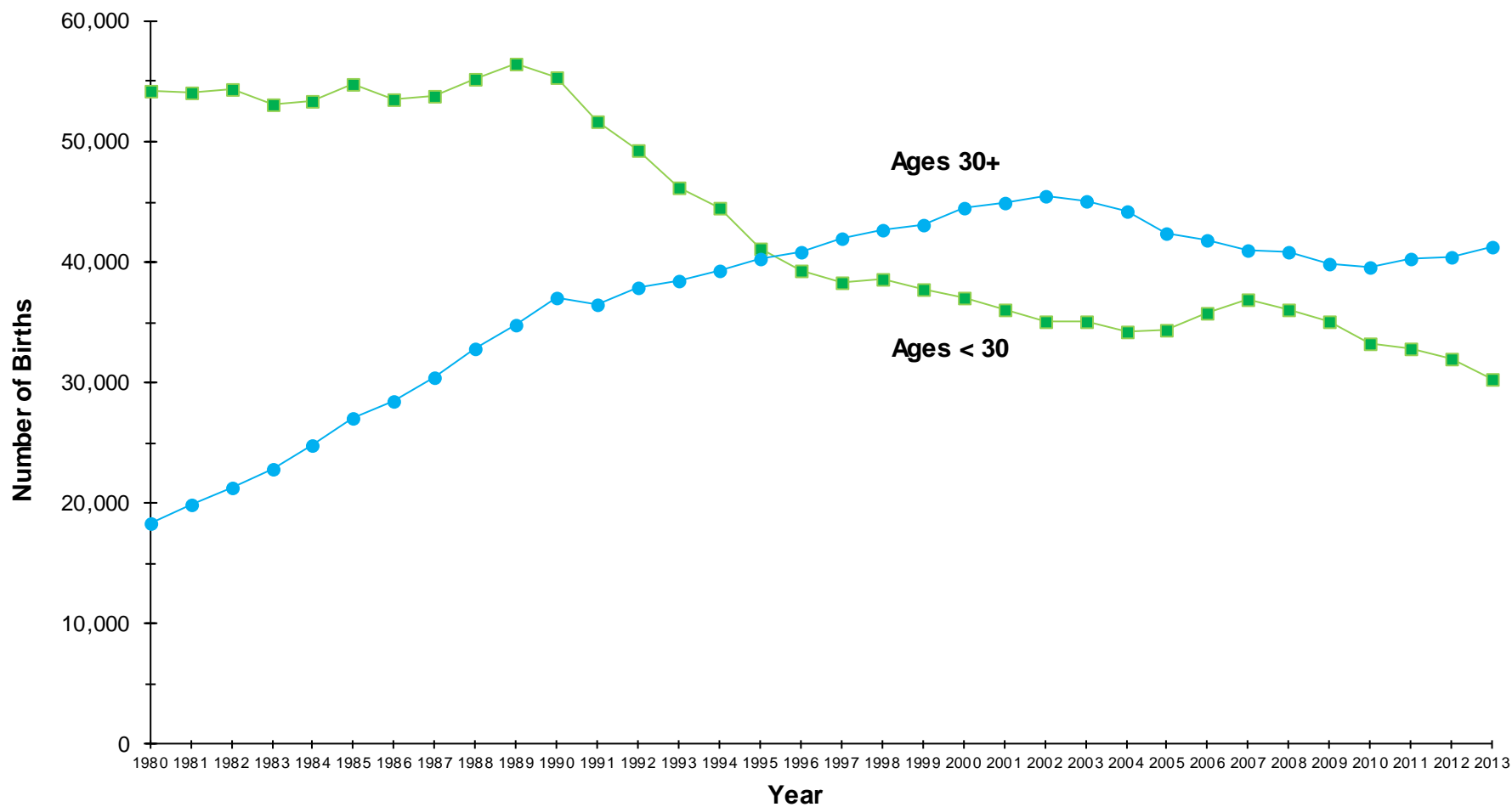


Table 4. Age-Specific and Crude Birth Rates, Massachusetts: 1990 and 2013					
Mother's Age	1990		2013		Percent Change in Rate
	Births¹	Rate	Births	Rate²	
10-14	124	1.3	33	0.2	-84.6%
15-19	7,259	35.1	2,732	12.0	-65.8%
20-24	18,115	69.5	9,937	41.2	-40.7%
25-29	29,913	107.2	17,584	73.7	-31.3%
30-34	25,687	93.9	24,788	111.8	19.1%
35-39	9,795	40.1	13,278	65.5	63.3%
40-44	1,522	6.9	3,020	13.3	92.8%
45+³	46	0.3	245	1.0	233.3%
Birth Rate⁴ (ages 15-44)	92,290	62.2	71,399	52.5	-15.6%
Crude Birth Rate⁵	92,461	15.4	71,618	10.7	-30.5%
<p>NOTE: All percentages are calculated based on only births with known values for the characteristic(s) of interest, unless otherwise stated.</p> <ol style="list-style-type: none"> 1. Differences in the number of births from previous publications are the result of updated files. The number of births for all age groups does not always add to the total number of births because mother's age is sometimes not recorded on the birth certificate. 2. Population estimates from the National Center for Health Statistics for 2012 were used to calculate birth rates at the state level. 3. Denominator is the female population ages 45-49. 4. Rate represents the total number of births to women ages 15-44 per 1,000 females in the population ages 15 to 44. 5. Births per 1,000 residents (male and female). Includes births to mothers of all age groups and mothers for whom age is unknown. 					

Table 5. Trends in Number and Percent Distribution of Births by Plurality and Maternal Age Massachusetts: 1999-2013

Age Group	Year	Singletons		Multiples ¹						Total births ²	
		n	%	Twins		Triplets or more		Total Multiples		n	%
		n	%	n	%	n	%	n	%	n	%
All Ages											
1999		77,473	95.8	3,147	3.9	246	0.3	3,393	4.2	80,866	100.0
2000		78,075	95.7	3,263	4.0	244	0.3	3,507	4.3	81,582	100.0
2001		77,409	95.6	3,371	4.2	234	0.3	3,605	4.4	81,014	100.0
2002		76,673	95.1	3,708	4.6	243	0.3	3,951	4.9	80,624	100.0
2003		76,367	95.3	3,551	4.4	249	0.3	3,800	4.7	80,167	100.0
2004		74,677	95.2	3,538	4.5	245	0.3	3,783	4.8	78,460	100.0
2005		73,258	95.4	3,375	4.4	190	0.2	3,565	4.6	76,824	100.0
2006		74,146	95.5	3,375	4.3	149	0.2	3,524	4.5	77,670	100.0
2007		74,498	95.6	3,310	4.2	126	0.2	3,436	4.4	77,934	100.0
2008		73,475	95.5	3,365	4.4	129	0.2	3,494	4.5	76,969	100.0
2009		71,423	95.3	3,386	4.5	157	0.2	3,543	4.7	74,966	100.0
2010		69,508	95.4	3,220	4.4	107	0.1	3,327	4.6	72,835	100.0
2011		69,933	95.6	3,135	4.3	100	0.1	3,235	4.4	73,169	100.0
2012		69,272	95.6	3,093	4.3	90	0.1	3,183	4.4	72,457	100.0
2013		68,363	95.5	3,164	4.4	91	0.1	3,255	4.5	71,618	100.0
Ages <35											
1999		61,816	96.4	2,147	3.3	150	0.2	2,297	3.6	64,113	100.0
2000		61,659	96.4	2,205	3.4	130	0.2	2,335	3.6	63,994	100.0
2001		60,704	96.3	2,211	3.5	134	0.2	2,345	3.7	63,049	100.0
2002		59,736	96.0	2,379	3.8	127	0.2	2,506	4.0	62,242	100.0
2003		59,347	95.9	2,389	3.9	118	0.2	2,507	4.1	61,854	100.0
2004		57,618	96.0	2,229	3.7	142	0.2	2,371	4.0	59,989	100.0
2005		56,380	96.3	2,086	3.6	102	0.2	2,188	3.7	58,569	100.0
2006		57,237	96.3	2,116	3.6	89	0.1	2,205	3.7	59,442	100.0
2007		57,977	96.3	2,144	3.6	87	0.1	2,231	3.7	60,208	100.0
2008		57,080	96.3	2,111	3.6	78	0.1	2,189	3.7	59,269	100.0
2009		55,906	96.1	2,202	3.8	80	0.1	2,282	3.9	58,188	100.0
2010		54,369	96.3	2,018	3.6	58	0.1	2,076	3.7	56,445	100.0
2011		54,837	96.4	2,014	3.5	59	0.1	2,073	3.6	56,910	100.0
2012		54,069	96.4	1,961	3.5	57	0.1	2,018	3.6	56,089	100.0
2013		52,995	96.2	2,025	3.7	54	0.1	2,079	3.8	55,074	100.0
Ages 35+											
1999		15,657	93.5	1,000	6.0	96	0.6	1,096	6.5	16,753	100.0
2000		16,412	93.3	1,058	6.0	114	0.6	1,172	6.7	17,584	100.0
2001		16,703	93.0	1,160	6.5	100	0.6	1,260	7.0	17,963	100.0
2002		16,936	92.1	1,329	7.2	116	0.6	1,445	7.9	18,381	100.0
2003		17,015	92.9	1,162	6.3	131	0.7	1,293	7.1	18,308	100.0
2004		17,055	92.4	1,309	7.1	103	0.6	1,412	7.6	18,467	100.0
2005		16,874	92.5	1,289	7.1	88	0.5	1,377	7.5	18,251	100.0
2006		16,901	92.8	1,257	6.9	60	0.3	1,317	7.2	18,218	100.0
2007		16,519	93.2	1,166	6.6	39	0.2	1,205	6.8	17,724	100.0
2008		16,392	92.6	1,254	7.1	51	0.3	1,305	7.4	17,697	100.0
2009		15,513	92.5	1,184	7.1	77	0.5	1,261	7.5	16,774	100.0
2010		15,136	92.4	1,200	7.3	49	0.3	1,249	7.6	16,385	100.0
2011		15,092	92.8	1,121	6.9	41	0.3	1,162	7.1	16,255	100.0
2012		15,202	92.9	1,132	6.9	33	0.2	1,165	7.1	16,367	100.0
2013		15,367	92.9	1,139	6.9	37	0.2	1,176	7.1	16,543	100.0

1. Numbers of multiples (n) represent individual infants rather than sets of infants. 2. Differences in the number of births from previous publications are the result of updated files.

Table 6. Births by Birthweight, Race/Hispanic Ethnicity, Massachusetts: 2013

Birthweight (in grams)	Total		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other		Unknown race/ethnicity	
	n	% ¹	n	% ¹	n	% ¹	n	% ¹	n	% ¹	n	% ¹	n	% ¹
State Total	71,618	100.0	44,432	100.0	7,016	100.0	12,315	100.0	6,220	100.0	756	100.0	879	100.0
<500	87	0.1	36	0.1	21	0.3	18	0.1	4	-- ²	2	-- ²	6	0.8
500-999	343	0.5	181	0.4	62	0.9	67	0.5	23	0.4	3	-- ²	7	0.9
1,000-1,499	507	0.7	283	0.6	85	1.2	88	0.7	43	0.7	4	-- ²	4	-- ²
1,500-1,999	1,087	1.5	659	1.5	136	1.9	194	1.6	81	1.3	9	1.2	8	1.1
2,000-2,499	3,471	4.9	1,945	4.4	456	6.5	642	5.2	343	5.5	36	4.8	49	6.5
2,500-2,999	11,689	16.4	6,295	14.2	1,441	20.6	2,272	18.5	1,423	22.9	135	17.9	123	16.2
3,000-3,499	26,761	37.5	15,994	36.1	2,672	38.2	4,942	40.2	2,606	41.9	295	39.0	252	33.2
3,500-3,999	20,595	28.8	13,992	31.6	1,672	23.9	3,129	25.4	1,374	22.1	197	26.1	231	30.4
4,000-4,499	5,922	8.3	4,308	9.7	386	5.5	809	6.6	284	4.6	65	8.6	70	9.2
4,500-4,999	855	1.2	635	1.4	56	0.8	117	1.0	31	0.5	8	1.1	8	1.1
>=5,000	95	0.1	60	0.1	12	0.2	17	0.1	3	-- ²	2	-- ²	1	-- ²
Unknown birthweight	206	0.3	44	0.1	17	0.2	20	0.2	5	0.1	0	0.0	120	13.7
VLBW³ (0-1,499 g)	937	1.3	500	1.1	168	2.4	173	1.4	70	1.1	9	1.2	17	2.2
LBW⁴ (0-2,499 g)	5,495	7.7	3,104	7.0	760	10.9	1,009	8.2	494	7.9	54	7.1	74	9.7

NOTE: Percentages for detailed birthweight rows ("<500" through "Unknown birthweight") are calculated based on births including those with unknown birthweight. Percentages for VLBW and LBW rows are calculated based on births with known birthweight only.

1. Percentages are based on column totals. 2. Calculations based on values of 1-4 are excluded. 3. Very Low Birthweight (VLBW): less than 1,500 grams (3.3 lbs.). 4. Low Birthweight (LBW): less than 2,500 grams (5.5 lbs.).

Table 7. Low Birthweight by Plurality and Maternal Age, Massachusetts: 2003-2013

Maternal Age Group (years)	Year	Singleton				Twin				Multiples				Total Multiples				Total Births			
		VLBW ¹		LBW ²		VLBW ¹		LBW ²		VLBW ¹		LBW ²		VLBW ¹		LBW ²		VLBW ¹		LBW ²	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Ages	2003	713	0.9	4,006	5.3	331	9.3	1,877	52.9	71	28.5	232	93.2	402	10.6	2,109	55.6	1,115	1.4	6,115	7.6
	2004	740	1.0	4,015	5.4	324	9.2	1,879	53.2	84	34.4	231	94.7	408	10.8	2,110	55.9	1,148	1.5	6,125	7.8
	2005	701	1.0	4,126	5.6	322	9.5	1,765	52.3	75	39.5	181	95.3	397	11.1	1,946	54.6	1,098	1.4	6,072	7.9
	2006	687	0.9	4,264	5.8	308	9.1	1,746	51.8	46	31.1	140	94.6	354	10.1	1,886	53.6	1,041	1.3	6,150	7.9
	2007	693	0.9	4,258	5.7	306	9.2	1,772	53.6	54	42.9	117	92.9	360	10.5	1,889	55.0	1,053	1.4	6,147	7.9
	2008	627	0.9	4,039	5.5	324	9.7	1,803	53.8	55	42.6	113	87.6	379	10.9	1,916	55.1	1,006	1.3	5,955	7.8
	2009	677	1.0	3,886	5.5	276	8.2	1,771	52.7	61	38.9	147	93.6	337	9.6	1,918	54.5	1,014	1.4	5,804	7.8
	2010	643	0.9	3,882	5.6	288	8.9	1,668	51.8	30	28.8	100	96.2	318	9.6	1,768	53.2	961	1.3	5,650	7.8
	2011	629	0.9	3,824	5.6	286	9.2	1,541	49.8	41	41.0	93	93.0	327	10.2	1,634	51.2	956	1.3	5,458	7.6
	2012	585	0.8	3,810	5.5	252	8.2	1,592	51.6	41	45.6	89	98.9	300	7.5	1,731	43.5	878	1.2	5,491	7.6
	2013	596	0.9	3,727	5.5	318	10.1	1,686	53.5	23	25.8	82	92.1	351	8.6	1,825	45	937	1.3	5,495	7.7
Ages < 35	2003	539	0.9	3,161	5.3	256	10.7	1,325	55.5	38	32.2	114	96.6	294	11.7	1,439	57.5	833	1.3	4,600	7.5
	2004	565	1.0	3,128	5.4	207	9.3	1,224	55.0	56	39.7	133	94.3	263	11.1	1,357	57.3	828	1.4	4,485	7.5
	2005	552	1.0	3,198	5.7	215	10.3	1,149	55.1	47	46.1	100	98.0	262	12.0	1,249	57.1	814	1.4	4,447	7.6
	2006	534	0.9	3,342	5.8	217	10.3	1,157	54.8	28	31.5	83	93.3	245	11.1	1,240	56.3	779	1.3	4,582	7.7
	2007	533	0.9	3,317	5.7	223	10.4	1,191	55.6	45	51.7	85	97.7	268	12.0	1,276	57.2	801	1.3	4,593	7.6
	2008	492	0.9	3,134	5.5	218	10.4	1,181	56.2	34	43.6	70	89.7	252	11.6	1,251	57.4	744	1.3	4,385	7.4
	2009	525	0.9	3,093	5.6	174	7.9	1,187	54.2	36	45.0	76	95.0	210	9.2	1,263	55.6	735	1.3	4,356	7.5
	2010	489	0.9	3,071	5.7	206	10.2	1,059	52.5	22	40.0	51	92.7	228	11.0	1,110	53.5	717	1.3	4,181	7.4
	2011	475	0.9	2,964	5.5	189	9.5	1,034	52.0	31	52.5	54	91.5	220	10.8	1,088	53.2	695	1.2	4,052	7.2
	2012	437	0.8	2,964	5.5	185	9.5	1,066	54.6	34	59.6	57	100	226	8.4	1,168	43.5	656	1.2	4,087	7.3
	2013	433	0.8	2,852	5.4	225	11.2	1,101	54.6	17	32.7	48	92.3	250	9.1	1,202	43.7	675	1.2	4,001	7.3
Ages 35+	2003	174	1.0	844	5.0	75	6.5	552	47.5	33	25.2	118	90.1	108	8.4	670	51.9	282	1.5	1,514	8.3
	2004	174	1.0	886	5.2	117	9.0	655	50.2	28	27.2	98	95.1	145	10.3	753	53.5	319	1.7	1,639	8.9
	2005	149	0.9	927	5.5	107	8.3	616	47.8	28	31.8	81	92.0	135	9.8	697	50.6	284	1.6	1,624	8.9
	2006	151	0.9	919	5.4	89	7.1	587	46.8	18	30.5	57	96.6	107	8.1	644	49.0	258	1.4	1,563	8.6
	2007	160	1.0	941	5.7	83	7.1	581	49.8	9	23.1	32	82.1	92	7.6	613	50.9	252	1.4	1,554	8.8
	2008	135	0.8	905	5.6	106	8.5	622	49.8	21	41.2	43	84.3	127	9.8	665	51.2	262	1.5	1,570	8.9
	2009	152	1.0	792	5.1	102	8.7	584	49.9	25	32.5	71	92.2	127	10.2	655	52.5	279	1.7	1,447	8.7
	2010	154	1.0	810	5.4	82	6.8	609	50.8	8	16.3	49	100.0	90	7.2	658	52.8	244	1.5	1,468	9.0
	2011	154	1.0	860	5.8	97	8.8	507	45.9	10	24.4	39	95.1	107	9.3	546	47.6	261	1.6	1,406	8.8
	2012	148	1	846	5.6	67	5.9	526	46.5	7	21.2	32	97.0	74	5.7	563	43.5	222	1.4	1,404	8.6
	2013	163	1.1	875	5.7	93	8.2	585	51.6	6	16.2	34	91.9	101	7.7	623	47.6	262	1.6	1,494	9.1

NOTE: Very Low Birthweight (VLBW) births are a subset of Low Birthweight (LBW) births. All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. 1. Very Low Birthweight (VLBW): less than 1,500 grams (3.3 lbs.). 2. Low Birthweight (LBW): less than 2,500 grams (5.5 lbs.).

Table 8. Births by Gestational Age, Race/Hispanic Ethnicity, Massachusetts: 2013

Gestational Age ¹ (weeks completed)	Total		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other ³		Unknown
	n	% ²	n	% ²	n	% ²	n	% ²	n	% ²	n	% ²	n
State Total	71,390	100.0	44,379	100.0	6,998	100.0	12,289	100.0	6,214	100.0	755	100.0	755
<20	26	0.04	12	0.03	6	0.1	8	0.1	0	0.0	0	0.0	0
20-23	128	0.2	59	0.1	34	0.5	20	0.2	7	0.1	2	-- ⁴	6
24-27	278	0.4	136	0.3	55	0.8	62	0.5	15	0.2	3	-- ⁴	7
28-31	610	0.9	352	0.8	90	1.3	112	0.9	45	0.7	5	0.7	6
32-33	740	1.0	469	1.1	91	1.3	126	1.0	42	0.7	5	0.7	7
34-36	4,518	6.3	2,766	6.2	507	7.2	790	6.4	359	5.8	49	6.5	47
37-38	15,017	21.0	8,690	19.6	1,634	23.3	2,831	23.0	1,542	24.8	139	18.4	181
39	23,978	33.6	14,881	33.5	2,146	30.7	4,188	34.1	2,216	35.7	288	38.1	259
40	18,097	25.3	11,617	26.2	1,674	23.9	2,997	24.4	1,457	23.4	193	25.6	159
41	7,591	10.6	5,095	11.5	725	10.4	1,113	9.1	516	8.3	67	8.9	75
42	401	0.6	299	0.7	35	0.5	41	0.3	14	0.2	4	-- ⁴	8
43	6	0.0	3	-- ⁴	1	-- ⁴	1	-- ⁴	1	-- ⁴	0	0.0	0
44+	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
<u>Preterm⁵ (<37)</u>	6,300	8.8	3,794	8.5	783	11.2	1,118	9.1	468	7.5	64	8.5	73
Very Early ⁶ (<28)	432	0.6	207	0.5	95	1.4	90	0.7	22	0.4	5	0.7	13
(28-33)	1,350	1.9	821	1.8	181	2.6	238	1.9	87	1.4	10	1.3	13
Late (34-36)	4,518	6.3	2,766	6.2	507	7.2	790	6.4	359	5.8	49	6.5	47
<u>Term (≥37)</u>	65,090	91.2	40,585	91.5	6,215	88.8	11,171	90.9	5,746	92.5	691	91.5	682
Early Term (37-38)	15,017	21.0	8,690	19.6	1,634	23.3	2,831	23.0	1,542	24.8	139	18.4	181
(39-41)	49,666	69.6	31,593	71.2	4,545	64.9	8,298	67.5	4,189	67.4	548	72.6	493
(≥42)	407	0.6	302	0.7	36	0.5	42	0.3	15	0.2	4	-- ⁴	8
Unknown ⁷	228		53		18		26		6		1		124

NOTE: Percentages are calculated based on births with known gestational age only.

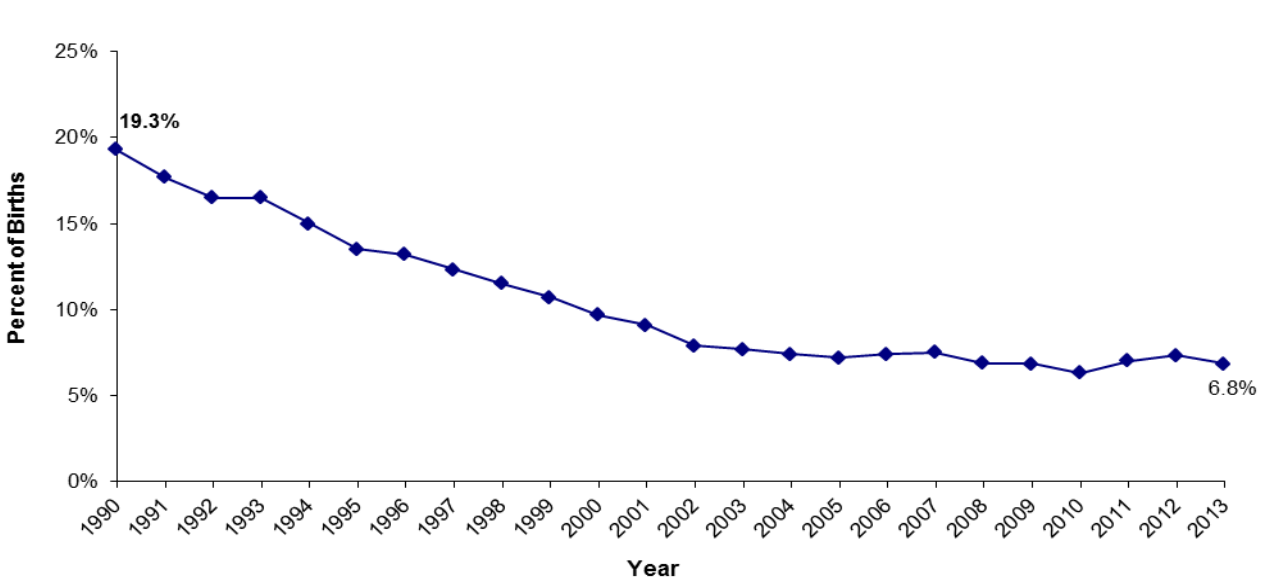
1. A clinical estimate of the number of weeks of pregnancy completed; as estimated by the attendant at birth or the postnatal physician. 2. Percentages are based on column total. 3. Other races include American Indian and others not specified. 4. Calculations based on values of 1-4 are excluded. 5. Also known as early gestational age, premature delivery, or preterm delivery. 6. Also known as extremely premature delivery, or extremely preterm delivery. 7. Estimate of gestational age not provided and excluded from percentage calculations.

Table 9. Percent Preterm and Term Births by Gestational Age Category, Massachusetts: 1999-2013

	Preterm ¹			Term ²	
Year	very early preterm (<28 wks)	moderate preterm (28-33 wks)	late preterm (34-36 wks)	early term (37-38 wks)	full term (37+ wks)
1999	0.6	1.9	5.2	17.1	92.4
2000	0.6	2.0	5.7	18.7	91.7
2001	0.6	1.9	5.5	18.8	92.0
2002	0.6	1.9	5.9	20.0	91.5
2003	0.7	2.1	6.0	20.8	91.3
2004	0.6	2.2	6.4	22.3	90.8
2005	0.6	2.1	6.3	22.3	91.0
2006	0.6	2.0	6.3	22.7	91.0
2007	0.6	2.0	6.4	22.6	91.0
2008	0.6	2.0	6.2	22.6	91.2
2009	0.7	1.9	6.2	20.8	91.3
2010	0.6	2.0	6.0	21.1	91.4
2011	0.6	1.9	5.9	21.8	91.6
2012	0.6	1.8	6.2	21.5	91.4
2013	0.6	1.9	6.3	21.0	91.2

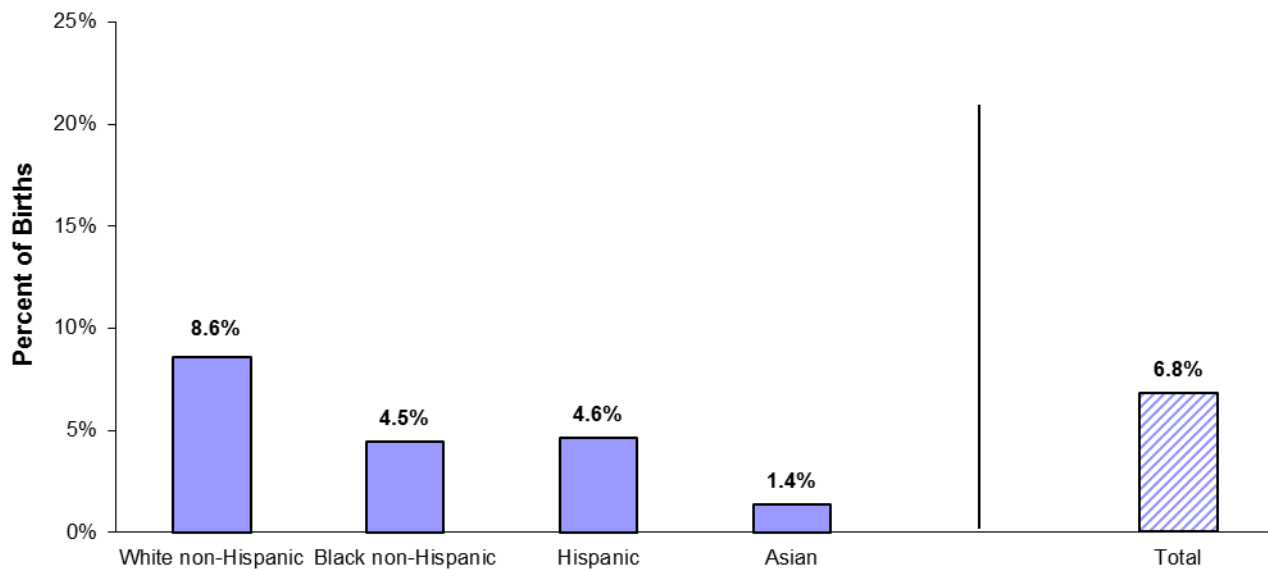
1. Also known as early gestational age, premature delivery, or preterm delivery. Preterm: <37 weeks gestation. 2. Full term and early term are not mutually exclusive.

**Figure 2. Percent of Mothers Who Reported Smoking during Pregnancy
Massachusetts: 1990-2013**



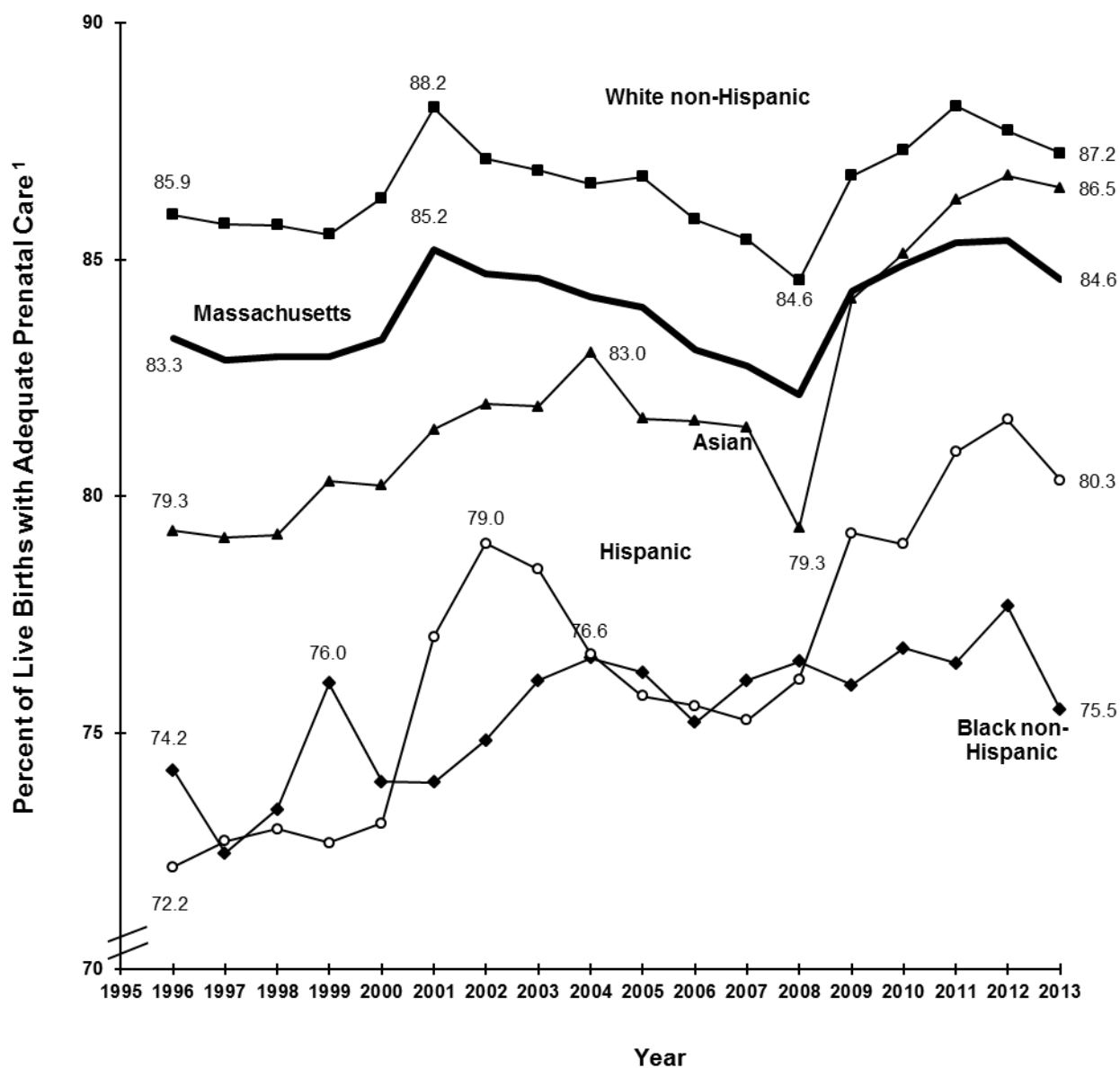
NOTE: Smoking information is provided on the birth certificate as reported by the mother. Due to self-reported nature, data on smoking prevalence should be interpreted cautiously.

**Figure 3. Percent of Mothers Who Reported Smoking during Pregnancy by Mother's
Race/Hispanic Ethnicity, Massachusetts: 2013**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Asian data should be interpreted with caution because of small numbers. Smoking information is provided on the birth certificate as reported by the mother. Due to self-reported nature, data on smoking prevalence should be interpreted cautiously.

Figure 4. Trends in Adequacy of Prenatal Care by Race and Hispanic Ethnicity, Massachusetts: 1996-2013

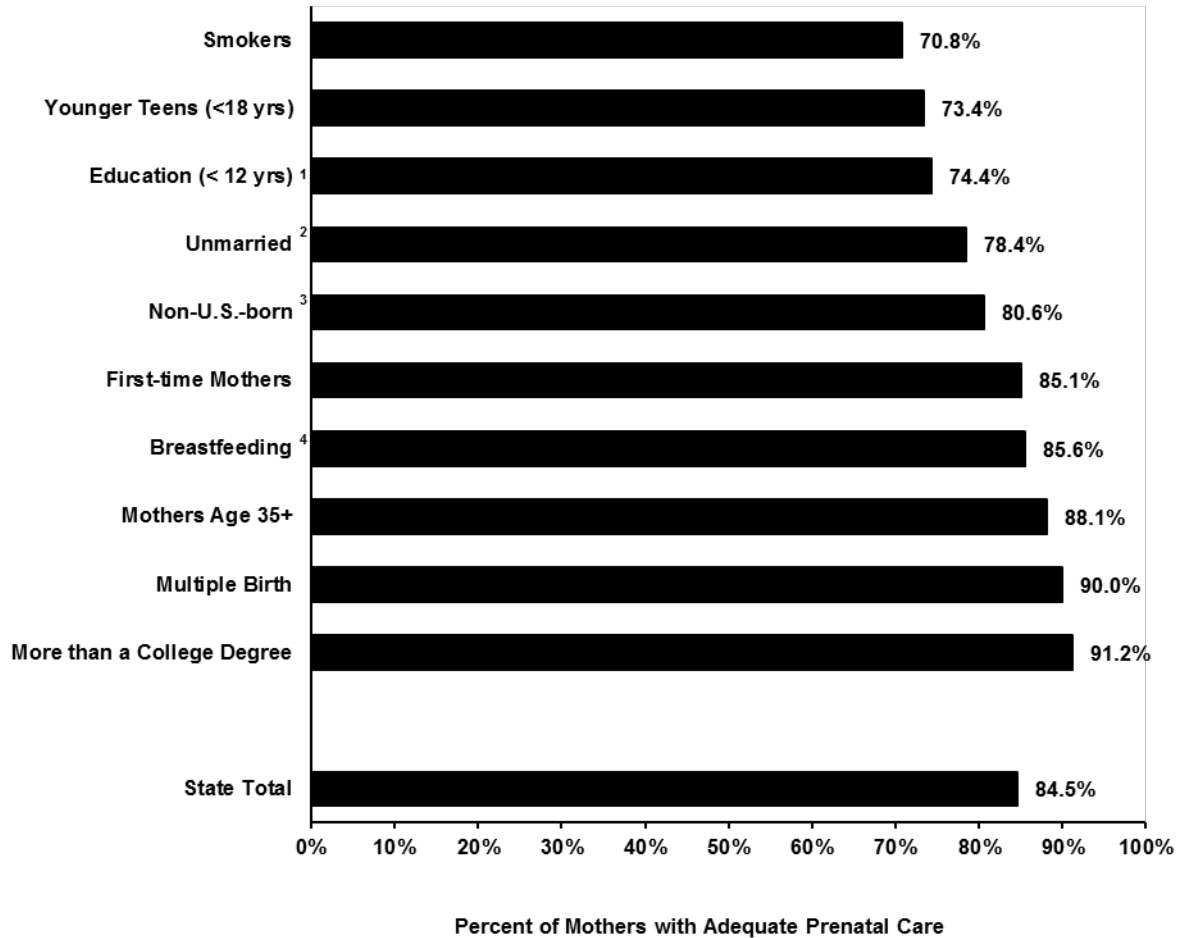


PLEASE NOTE THAT FOR PURPOSES OF VISUAL REPRESENTATION THE VERTICAL SCALE OF GRAPH REPRESENTS A SMALL INTERVAL (from 70% to 90%).

1. All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

Please note that the Adequacy of Prenatal Care Utilization (APNCU) Index is an assessment of the timing and number of prenatal care visits and not an evaluation of the quality of care delivered. In 2011 and 2012, does not include data from MetroWest, Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. In 2013, does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems

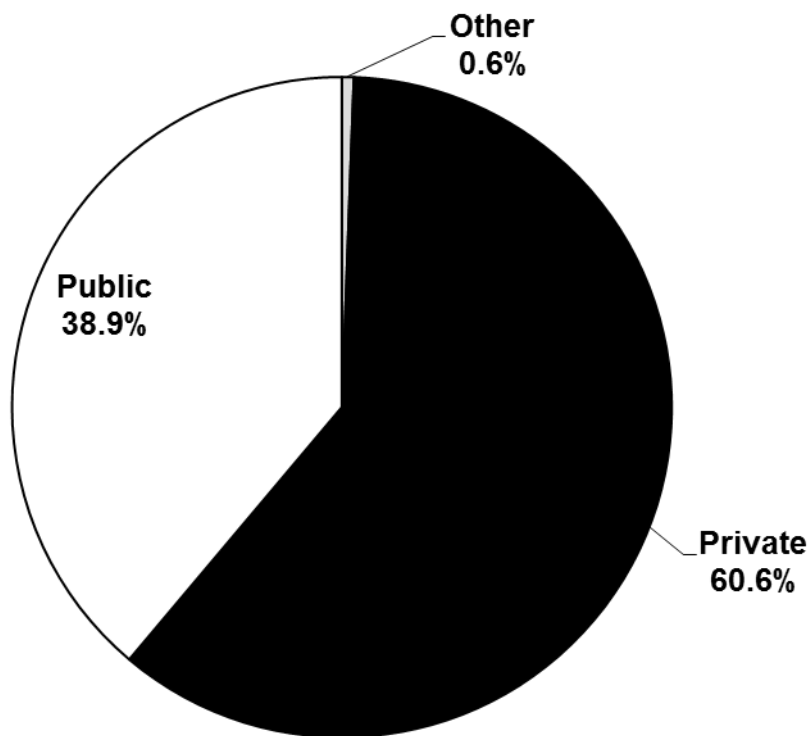
Figure 5. Adequacy of Prenatal Care by Selected Maternal Characteristics, Massachusetts: 2013



NOTE: All percentages are calculated based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. Characteristics of interest are not mutually exclusive, except as noted.

1. Women 20 years of age and older. 2. Marital status at time of birth. 3. Non-US-born includes women born outside of the 50 U.S. states, District of Columbia, and U.S. territories (Puerto Rico, U.S. Virgin Islands, Guam). 4. Infant was being breastfed at time of discharge.

Figure 6. Distribution of Prenatal Care Payment Source, Massachusetts: 2013



NOTE: Sources of Prenatal Care Payment include private: Commercial indemnity plan, commercial managed care (HMO, PPO, IPP, IPA, and other), or other private insurance; public: Government programs including CommonHealth, Healthy Start, Medicaid/MassHealth, and Medicare (may also be HMO or managed care), or free care; and other: self-pay.

Table 10. Resident Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2013

Municipality ¹	Rank (by pop. size)	Population	Crude Birth Rate ²	Mother's Race and Ethnicity				Birth weight		Gestational Diabetes
				White non- Hispanic % ³	Black non- Hispanic % ³	Hispanic % ³	Asian or Other ⁴ % ³	Very Low (<1500 g) %	Low (<2500 g) %	
STATE TOTAL		6,646,144	10.9	62.0	9.8	17.2	9.7	1.3	7.7	5.3
Arlington	30	42839	14.3	73.2	3.8	3.9	19.0	0.7	7.4	4.2
Attleboro	29	43585	10.4	78.9	5.1	10.3	5.5	0.7	8.4	2.2
Barnstable	27	45185	8.8	71.0	8.1	12.1	7.3	1.3	8.4	1.3
Boston	1	617594	12.7	38.8	26.7	23.6	9.9	1.4	8.8	4.0
Brockton	7	93802	15.9	26.5	55.2	13.8	4.4	1.8	8.6	5.6
Brookline	18	58730	12.2	66.4	2.1	4.5	26.5	1.5	7.5	2.8
Cambridge	5	105157	12.2	57.5	11.9	7.8	21.6	0.7	8.0	4.7
Chicopee	22	55295	11.3	63.8	5.1	27.4	3.3	0.8	7.5	9.9
Fall River	10	88844	12.0	73.9	6.5	15.6	3.7	2.2	8.9	6.6
Framingham	14	68314	12.8	52.7	8.2	27.3	11.2	0.8	7.3	4.8
Haverhill	15	60876	13.1	68.4	4.9	22.8	2.9	1.8	10.3	5.4
Lawrence	12	76368	17.1	8.6	2.3	86.5	2.4	2.0	9.5	4.7
Lowell	4	106517	15.2	36.7	9.4	23.5	29.8	1.5	8.4	11.4
Lynn	9	90328	16.1	26.0	10.6	48.7	10.9	1.7	7.4	5.3
Malden	17	59447	14.1	35.1	20.4	15.4	28.2	1.1	8.0	6.2
Medford	20	56171	12.4	66.7	8.6	8.8	15.5	1.4	6.8	4.9
Methuen	26	47252	12.7	57.0	3.5	31.4	7.2	1.5	5.5	4.0
New Bedford	6	95071	13.7	56.4	9.7	28.0	4.6	1.4	9.0	7.7
Newton	11	85142	9.4	68.9	3.7	6.0	20.6	1.0	7.4	3.3
Peabody	25	51253	9.3	68.6	3.6	14.7	6.3	0.8	6.7	6.5
Pittsfield	28	44728	10.0	74.2	7.8	13.5	3.8	1.1	7.4	2.9
Plymouth	19	56455	9.0	90.4	3.0	3.5	2.8	1.8	9.1	2.6
Quincy	8	92275	13.6	49.3	6.9	6.4	36.7	1.4	6.4	7.9
Revere	24	51744	14.7	41.1	6.8	38.8	11.8	1.2	8.4	3.8
Somerville	13	75748	12.7	61.8	6.6	18.4	11.8	1.5	8.1	3.9
Springfield	3	153057	14.3	23.1	20.2	52.7	3.7	1.6	9.4	6.8
Taunton	21	55869	11.4	73.8	11.9	8.5	3.8	1.1	7.4	4.7
Waltham	16	60621	12.9	53.3	8.7	20.3	16.8	1.2	7.9	3.3
Weymouth	23	53736	11.7	75.7	10.5	4.3	9.0	2.1	8.4	6.7
Worcester	2	181041	13.8	46.6	17.1	26.8	8.3	1.8	8.1	5.3

Table 10 (cont'd). Resident Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2013

Municipality ¹	Adequate Prenatal Care ⁶	Public Payment ⁷ for Prenatal Care	Unmarried	Teen Mothers 15-19 years ⁸	
	%	%	%	n	Rate
STATE TOTAL	84.5	38.9	33.7	2,732	12.0
Arlington	91.6	8.7	5.1	-- ⁵	-- ⁵
Attleboro	79.6	23.6	30.2	16	11.9
Barnstable	68.9	55.8	39.2	11	8.6
Boston	84.2	44.8	41.0	318	12.2
Brockton	73.9	70.2	56.9	96	28.6
Brookline	91.2	8.3	3.6	-- ⁵	-- ⁵
Cambridge	85.0	16.9	13.2	8	2.3
Chicopee	86.4	51.7	51.4	44	23.4
Fall River	83.7	73.7	62.4	89	32.0
Framingham	88.1	40.7	29.6	32	13.6
Haverhill	84.3	45.3	44.0	40	22.3
Lawrence	74.5	81.3	67.9	139	40.9
Lowell	79.7	60.3	54.5	106	25.7
Lynn	78.0	71.0	53.3	106	32.9
Malden	81.8	49.7	27.8	11	7.1
Medford	83.6	22.4	17.6	7	4.2
Methuen	84.5	40.3	38.8	22	13.5
New Bedford	82.2	72.1	63.4	126	41.5
Newton	87.4	8.4	8.2	5	1.2
Peabody	82.5	33.3	27.7	11	7.8
Pittsfield	72.6	49.3	55.3	37	27.6
Plymouth	84.6	33.4	30.9	16	9.8
Quincy	87.6	34.4	22.6	16	8.1
Revere	83.5	56.9	36.5	37	25.8
Somerville	86.0	28.9	21.5	16	9.4
Springfield	80.7	75.9	68.4	289	42.3
Taunton	75.9	46.5	47.5	29	16.6
Waltham	83.7	29.6	22.0	16	6.8
Weymouth	86.6	31.9	27.3	9	6.2
Worcester	80.6	62.0	51.2	179	23.2

1. The 30 largest municipalities are the cities/ towns in Massachusetts with the largest populations (See Technical Notes). 2. Crude birth rates represent the number of births per 1,000 residents (male and female). 3. For the category of Mother's Race and Ethnicity, percentages are calculated based on the state total of resident births, including births for which mother's race/Hispanic ethnicity is unknown. 4. Mothers who designated themselves as Asian, American Indian, or Other. 5. Counts and calculations based on 1-4 events are excluded. 6. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. For the states total, does not include data from, Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 7. Public payment sources include CommonHealth, Healthy Start, Medicaid/MassHealth, and Medicare (may be HMO or managed care), or free care. 8. Births per 1,000 female residents ages 15-19; rates for cities and towns were calculated using MDPH population estimates for 2010.

Table 11. Birth Characteristics by Facility/Location, Massachusetts: 2013

Facility ⁽¹⁾	Location	(2) Occurrence Births (n)	(3) Low Birth weight (%)	(4) Public Pay for PNC (%)	(5) Adequate Prenatal Care (%)	Cesarean Deliveries (%)	(6) Early Term (%)	(7) Late preterm (%)
State Total		72,188	7.6	38.3	83.7	31.6	21.1	6.3
Anna Jaques Hospital	Newburyport	702	2.9	33.4	89.0	30.1	18.9	6.0
Baystate Franklin Medical Center	Greenfield	472	2.1	47.8	87.9	25.0	14.8	4.0
Baystate Medical Center	Springfield	4,100	11.2	54.5	83.9	33.2	21.2	8.3
Berkshire Medical Center	Pittsfield	611	5.2	44.0	73.0	23.2	14.6	4.7
Beth Israel Deaconess Medical Center	Boston	4,873	10.7	20.9	94.3	32.6	24.0	8.5
Beverly Hospital	Beverly	2,118	5.1	36.0	78.8	32.2	23.2	5.6
Boston Medical Center	Boston	2,524	11.2	82.0	56.0	29.3	23.5	6.5
Brigham and Women's Hospital	Boston	7,783	10.5	26.6	92.9	32.8	22.2	8.1
Brockton Hospital	Brockton	973	5.3	62.0	80.4	32.4	22.0	4.3
Cambridge Birth Center	Cambridge	140	-- ⁸	15.0	75.7	-- ⁸	15.0	-- ⁸
Cambridge Hospital	Cambridge	1,124	3.1	67.4	79.5	23.6	20.2	2.1
Cape Cod Hospital	Barnstable	774	3.2	56.0	61.6	31.7	14.1	6.3
Charlton Memorial Hospital	Fall River	1,505	6.7	59.9	85.0	35.6	16.1	5.2
Cooley Dickinson Hospital	Northampton	817	2.1	29.9	90.3	27.7	14.3	2.7
Emerson Hospital	Concord	1,129	4.4	16.3	87.6	29.1	21.6	7.5
Fairview Hospital	Great Barrington	136	5.9	21.3	86.8	23.5	22.8	-- ⁸
Falmouth Hospital	Falmouth	424	4.2	47.5	48.6	37.0	18.9	4.5
Good Samaritan Medical Center	Brockton	993	4.8	72.5	65.0	42.9	24.5	5.7
Harrington Memorial Hospital	Southbridge	293	3.1	55.3	94.9	28.0	20.9	2.7
Healthalliance Hospital	Leominster	925	4.9	59.1	83.6	26.2	19.8	4.3
Heywood Hospital	Gardner	436	6.4	54.4	78.5	17.4	17.7	3.4
Holy Family Hospital and Medical Center	Methuen	980	5.6	46.1	85.2	42.9	19.1	5.7
Holyoke Medical Center	Holyoke	439	2.3	68.3	70.5	25.6	16.9	3.0
Jordan Hospital	Plymouth	624	4.6	34.3	86.4	28.5	15.7	5.3
Lawrence General Hospital	Lawrence	1,514	6.4	68.0	77.5	30.7	21.3	5.6
Lowell General Hospital	Lowell	2,273	6.7	49.1	81.4	29.3	22.7	6.0
Martha's Vineyard Hospital	Oak Bluffs	144	-- ⁸	63.9	91.9	25.0	19.4	-- ⁸
Massachusetts General Hospital	Boston	3,727	9.7	29.6	86.3	30.8	21.9	7.1
Melrose-Wakefield Hospital	Melrose	982	3.4	35.1	89.4	36.0	22.4	3.7
Mercy Medical Center	Springfield	1,253	3.8	56.2	85.9	27.9	20.2	4.1
Metro West Medical Center	Framingham	845	7.5	51.7	95.4	37.2	25.7	7.6
Milford Regional Medical Center	Milford	893	4.5	34.4	91.3	32.4	21.8	3.8
Morton Hospital	Taunton	382	4.2	51.5	72.6	34.0	19.7	3.5
Mt. Auburn Hospital	Cambridge	2,563	3.7	15.3	88.7	21.8	16.7	3.3
Nantucket Cottage Hospital	Nantucket	118	-- ⁸	62.7	91.3	26.3	13.6	-- ⁸
Newton-Wellesley Hospital	Newton	4,189	4.9	5.5	83.2 ⁹	32.0	21.8	5.8
North Adams Regional Hospital	North Adams	238	2.1	52.3	92.4	31.5	24.1	8.0
North Shore Birth Center	Beverly	119	-- ⁸	21.0	94.0	-- ⁸	16.0	-- ⁸
North Shore Medical Center	Salem	1,344	4.5	59.2	81.0	31.0	22.4	5.7

Table 11. Birth Characteristics by Facility/Location, Massachusetts: 2013

Facility ⁽¹⁾	Location	(2) Occurrence Births (n)	(3) Low Birth weight (%)	(4) Public Pay for PNC (%)	(5) Adequate Prenatal Care (%)	Cesarean Deliveries (%)	(6) Early Term (%)	(7) Late preterm (%)
- Salem Hospital								
Norwood Hospital	Norwood	419	4.5	20.8	83.0	26.5	16.5	4.1
Saint Vincent Hospital	Worcester	1,906	4.4	38.3	75.6 ⁹	32.1	22.3	5.2
South Shore Hospital	Weymouth	3,339	7.4	23.1	89.9	39.3	18.7	6.4
St. Elizabeth's Medical Center	Boston	901	12.5	34.6	81.7	33.9	20.5	7.3
St. Luke's Hospital	New Bedford	1,426	6.7	66.2	82.9	35.8	22.7	7.2
Sturdy Memorial Hospital	Attleboro	729	4.0	21.2	67.7	33.6	14.5	4.1
Tobey Hospital	Wareham	480	2.1	48.4	85.5	21.7	13.0	2.1
Tufts Medical Center	Boston	1,174	28.2	45.5	85.4	42.2	23.9	16.1
Umass Memorial Medical Center	Worcester	3,958	11.7	44.9	91.1	29.0	22.7	7.1
Winchester Hospital	Winchester	1,927	6.2	13.7	68.0 ⁹	37.6	21.8	5.7
Other Hospitals		11	-- ⁸	-- ⁸	-- ⁸	-- ⁸	-- ⁸	-- ⁸
Home, Enroute & Dr. Off.		439	7.9	27.1	63.1	-- ⁸	16.5	2.7

NOTE: All percentages are calculated based on only those occurrence births with known values for the characteristic(s) of interest.

1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. 2. Occurrence births are births that occurred at the facility, regardless of where the mother was a resident. 3. Less than 2,500 grams (5.5 lbs.) 4. Public payment for prenatal care (PNC) includes Medicaid/MassHealth, CommonHealth, Medicare, Healthy Start, other government programs, and free care. 5. Based on the APNCU Index. 6. Birth at 37 or 38 weeks of gestation. 7. Birth at 34 to 36 weeks of gestation. 8. Calculations based on 1-4 events are excluded. 9. Percent should be interpreted with caution, as this is a facility that was identified as having reporting problems for prenatal care.

Table 12. Comparison of Massachusetts Perinatal Health Indicators with Healthy People 2020 Objectives, Massachusetts: 2010-2013

Healthy People 2020 Objectives ¹ (Focus Area: Maternal, Infant and Child Health MICH ²)	HP2020 Target	Massachusetts				Has Massachusetts achieved HP2020 target? ✓ = YES ○ = NO, but within 25% of target ● = NO, > 25% from target
		2010	2011	2012	2013	
Risk Factors						
MICH-8.1. Low Birthweight ³ (%)	7.8	7.8	7.6	7.6	7.7	✓
MICH-8.2. Very Low Birthweight ⁴ (%)	1.4	1.3	1.3	1.2	1.3	✓
MICH-9.1. Preterm ⁵ (%)	11.4	10.7	10.5	10.0	NA	NA ¹⁰
Prenatal Care						
MICH-10.1. Care beginning in first trimester (%)	77.9	83.9	83.0	82.1	82.5	✓
MICH-10.2. Early and adequate care ⁶ (%)	77.6	84.9	85.3	85.4	84.5	✓
Obstetrical Care						
MICH-33. Very Low Birthweight Infants born at Level III Hospitals ⁷ (%)	82.5	82.5	82.4	82.7	83.4	✓
MICH-7.1. Cesarean Sections: Low-Risk ⁸ Women Giving Birth for the First Time (%)	23.9	27.6	25.1	24.2	23.2	✓
MICH-7.2. Cesarean Sections: Low-Risk ⁸ Women with Prior Cesarean Section (%)	81.7	89.7	89.0	86.8	86.2	○
Breastfeeding						
MICH-21.1. Breastfeeding ⁹ (%)	81.9	82.9	82.5	82.7	84.6	✓
Prenatal Substance Exposure						
MICH-11.3. Abstinence from Smoking (%)	98.6	93.7	93.0	92.7	93.2	○

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. 1. National health promotion and disease prevention agenda established by the US Dept. of Health and Human Services. 2. Goal: to improve the health and well-being of women, infants, children, and families. 3. Less than 2,500 grams, or 5.5 pounds. 4. Less than 1,500 grams, or 3.3 pounds. 5. Born before completion of 37th week of gestation. **Note that beginning with the 2010 report, this indicator has been changed to reflect the NCHS method of calculating preterm using LMP.** The values do not match previously published values as well as preterm values published elsewhere in this report. See entry for Gestational Age in the Glossary for further explanation. 6. Based on Adequacy of Prenatal Care Utilization Index (see Glossary). Does not include data from Metro West, Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 7. Facilities for high-risk deliveries and neonates that can provide care to very small infants, including mechanical ventilation and neonatal surgery and special care for transferred patients and for which a full-time neonatologist serves as the director. 8. "Low-risk"= full term birth, singleton, vertex presentation. 9. HP2020 specifies objective as mother 'ever' breastfeeding. Massachusetts data is based on mother's self-report of whether infant was being breastfed at time of discharge, and of smoking during pregnancy. 10. This figure was not available at the time of the release of this report. 2012 data is available at: http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_03_tables.pdf

Figure 7. Maternal Body Mass Index (BMI) Prior to Pregnancy, Massachusetts: 2013

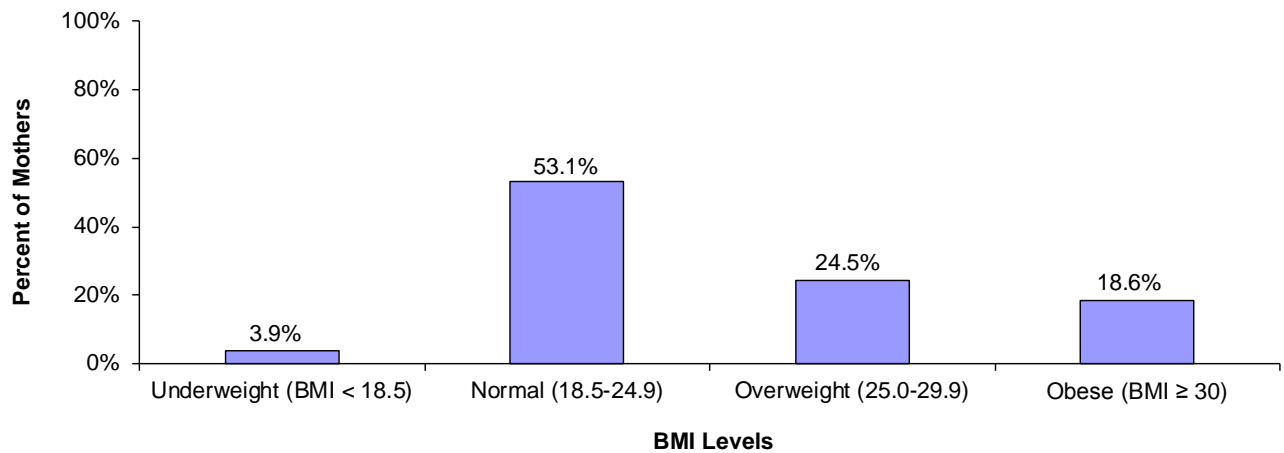
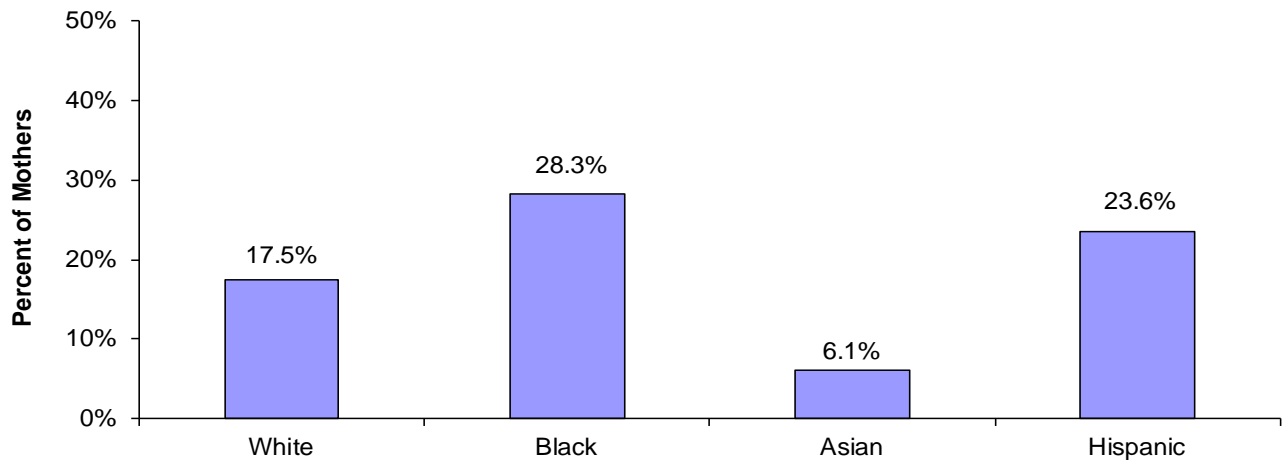


Figure 8. Obesity Prior to Pregnancy by Race and Hispanic Ethnicity, Massachusetts: 2013



Note: These figures are based on mothers and not births.

Figure 9. Mothers who Reported Having Their Teeth Cleaned During Pregnancy by Race and Hispanic Ethnicity, Massachusetts: 2013

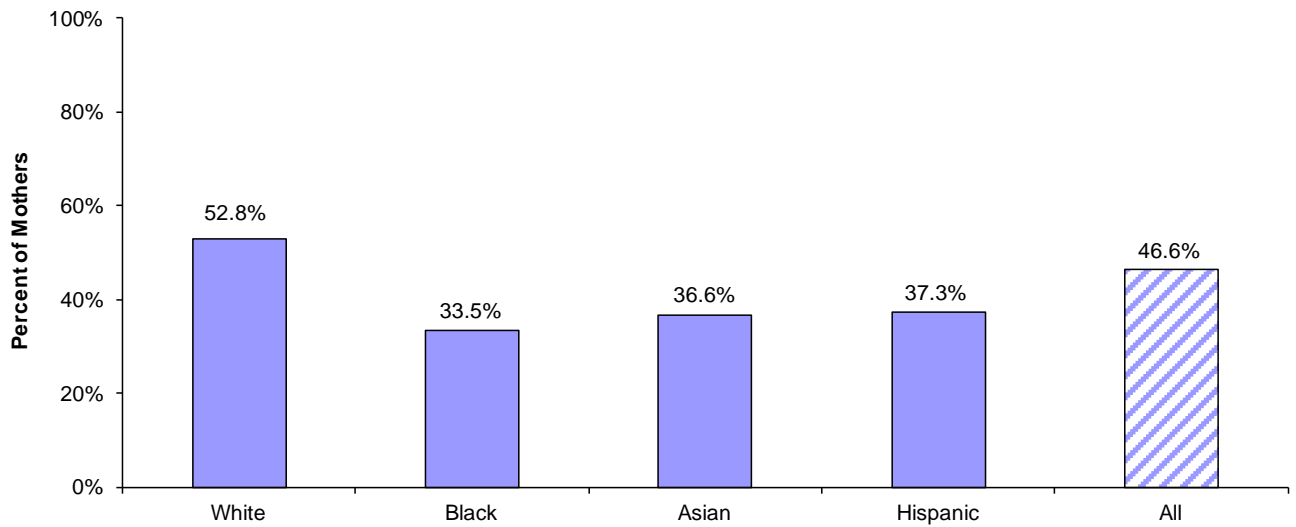
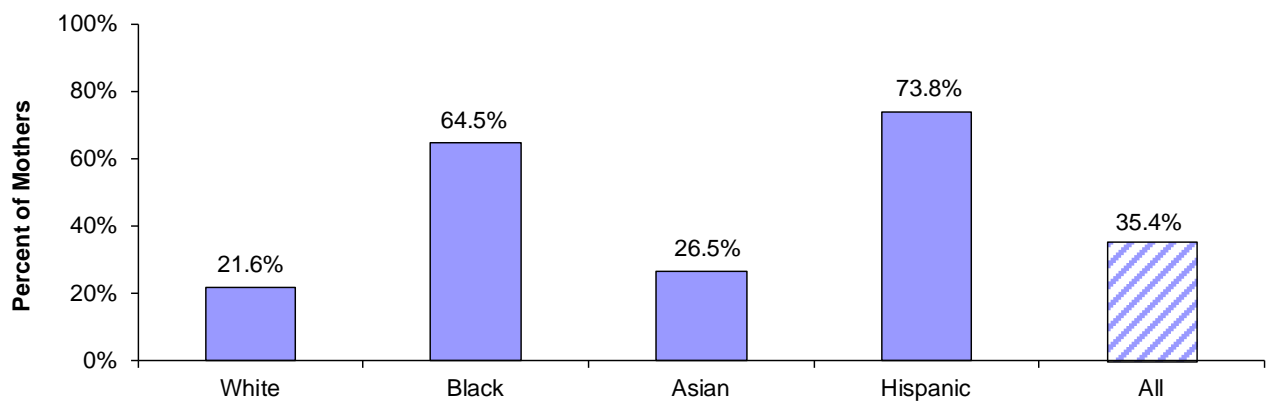


Figure 10. Mothers who Reported Having Received WIC Food During Pregnancy by Race and Hispanic Ethnicity, Massachusetts: 2013



Note: These figures are based on mothers and not births

Table 13. Selected Birth Characteristics by Maternal Education, Massachusetts: 2013

	<u>Less than High School</u>		<u>High School</u>		<u>Some College</u>		<u>Associate Degree</u>		<u>Bachelor's Degree</u>		<u>More than College</u>	
	n	% ¹	n	% ¹	n	% ¹	n	% ¹	n	% ¹	n	% ¹
State total	7,136	10.7	12,078	18.1	9,781	14.7	4,631.0	6.9	17,595	26.4	15,506	23.2
Race												
White non-Hispanic	1,901	4.9	5,972	14.2	5,571	13.2	3,113	7.4	13,547	32.2	11,954	28.4
Black non-Hispanic	1,029	17.8	1,658	25.9	1,536	24.0	606	9.5	1,074	16.8	489	7.7
Hispanic	3,569	33.2	3,503	30.8	2,081	18.3	621	5.5	1,022	9.0	583	5.1
Asian	523	9.0	749	12.4	469	7.7	232	3.8	1,753	28.9	2,338	38.6
Age (years)												
20-29	3,527	15.3	6,878	27.6	5,639	22.6	1,839	7.4	4,869	19.5	2,212	8.9
30-39	1,986	5.9	3,855	10.7	3,543	9.8	2,557	7.1	11,789	32.7	12,282	34.1
40+	226	7.4	338	11.0	319	10.4	231	7.5	935	30.5	1,012	33.1
Non-US-born²	3,252	45.6	3,941	32.6	2,358	24.1	1,201	26	4,131	23.5	4,023	25.9
Unmarried	5,024	70.8	7,291	60.6	5,133	52.7	1,472	32	2,051	11.7	683	4.4
Publicly financed prenatal care	6,670	97.2	9,271	78.7	5,358	55.8	1,516	34	2,322	14	716	4.7
Very low birthweight³	105	1.5	204	1.7	120	1.2	73	1.6	186	1.1	161	1.0
Low birthweight⁴	671	9.4	1,013	8.4	750	7.7	410	8.9	1,171	6.7	1,060	6.8
Adequate prenatal care⁵	4,581	74.1	8,221	79.4	6,731	82.3	3,292	86	12,019	89	10,698	91.2
Cesarean section delivery	1,909	26.8	3,696	30.6	3,073	31.5	1,616	35	5,806	33	4,791	30.9
Breastfeeding⁶	4,997	71.4	8,827	74.6	7,818	81.5	3,772	84	15,484	92	14,384	94.5
Multiple births	170	2.4	408	3.5	383	4.0	228	5.1	989	5.7	891	5.8
Smoking during pregnancy	991	14.5	1,762	15.1	1,042	10.9	228	5.1	174	1.0	45	0.3

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. For state total, race and age categories, percentages are based on row totals. For all other categories, percentages are based on state column totals. 2. Includes women born outside of the 50 US States, Washington D.C., and Puerto Rico/US territories (the US Virgin Islands, and Guam). 3. Very low birthweight: less than 1,500 grams or 3.3 pounds. 4. Low birthweight: less than 2,500 grams or 5.5 pounds. 5. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 6. Infant was being breastfed at time of discharge.

Table 14. Inter-pregnancy Interval (IPI) and Birth Outcomes -- Pregnancies to Multiparous Mothers, Massachusetts: 2013

IPI ¹ (months)	Pregnancies to Multiparous ² Mothers	Birth Weight				Gestational Age			
		Low (<2,500 g)		Very Low (<1,500 g)		Preterm ³ (<37 wk)		Very Early ⁴ (<28 wk)	
		n	%LBW	n	%VLBW	n	%Preterm	n	%VEGA
State Total	34,901	1,975	5.7%	279	0.8%	2,512	7.2%	131	0.4%
<6	1,463	103	7.0%	20	1.4%	134	9.2%	4	0.3%
6-11	3,431	148	4.3%	26	0.8%	223	6.5%	14	0.4%
12-17	4,915	219	4.5%	30	0.6%	288	5.9%	9	0.2%
18-23	4,411	188	4.3%	15	0.3%	246	5.6%	6	0.1%
24-29	3,670	171	4.7%	27	0.7%	224	6.1%	17	0.5%
30-35	3,017	175	5.8%	22	0.7%	227	7.5%	7	0.2%
36-41	2,256	136	6.0%	16	0.7%	157	7.0%	6	0.3%
42-47	1,777	117	6.6%	17	1.0%	141	7.9%	5	0.3%
48+	9,961	718	7.2%	106	1.1%	872	8.8%	63	0.6%
Short	0-11	4,894	5.1%	46	0.9%	357	7.3%	18	0.4%
	12-35	16,013	4.7%	94	0.6%	985	6.2%	39	0.2%
	36+	13,994	6.9%	139	1.0%	1,170	8.4%	74	0.5%

1. Interpregnancy Interval (IPI) is the time in months between the date of last menstrual period of current pregnancy and the date of previous live birth. 2. Multiparous is defined as having given birth two or more times. 3. Also known as premature delivery. 4. Very early gestational age (VEGA) refers to birth before 28 weeks of gestational age and is also known as *extremely preterm* delivery.

Table 15. Adequacy of Prenatal Care Utilization: Summary and Component Indices, Massachusetts: 2013

	Adequate Total ¹		Adequate Intensive		Adequate Basic		Intermediate		Inadequate		Unknown
	n	%	n	%	n	%	n	%	n	%	n
<u>Summary Index</u>											
Adequacy of Prenatal Care Utilization	48,811	84.5	24,716	42.8	24,095	41.7	3,142	5.4	5,796	10.0	5,967
<u>Component Indices</u>											
Adequacy of Initiation	52,328	90.6	19,712	34.1	32,616	56.5	3,127	5.4	2,294	4.0	5,967
Adequacy of Received Services (Visits)	53,479	92.6	28,485	49.3	24,994	43.3	3,571	6.2	699	1.2	5,967

NOTE: All percentages are calculated based on the Adequacy of Prenatal Care Utilization (APNCU) Index. **Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems.**

1. Adequate Total is the sum of Adequate Intensive and Adequate Basic categories.

Table 16. Birth Characteristics by Race/Hispanic Ethnicity and Source of Prenatal Care Payment, Massachusetts: 2013

Race/Ethnicity and Payment Source	Births ¹		Teen Births				Birthweight			
	n	%	<18 Years		<20 Years		Very Low ²		Low ³	
	n	%	n	%	n	%	n	%	n	%
STATE TOTAL⁴	71,618	100.0	765	1.1	2,766	3.9	937	1.3	5,495	7.7
Public	27,092	38.7	625	2.3	2,150	7.9	350	1.3	2,185	8.1
Medicaid ⁵	22,806	32.6	550	2.4	1,933	8.5	288	1.3	1,866	8.2
Other Public ⁶	4,286	6.1	75	1.7	217	5.1	62	1.4	319	7.4
Private ⁷	42,233	60.4	115	0.3	513	1.2	487	1.2	2,975	7.0
White non-Hispanic	44,432	100.0	229	0.5	981	2.2	500	1.1	3,104	7.0
Public	11,165	25.7	161	1.4	662	5.9	118	1.1	819	7.3
Medicaid ⁵	9,265	21.3	147	1.6	612	6.6	101	1.1	700	7.6
Other Public ⁶	1,900	4.4	14	0.7	50	2.6	17	0.9	119	6.3
Private ⁷	31,931	73.5	62	0.2	288	0.9	323	1.0	2,088	6.5
Black non-Hispanic	7,016	100.0	101	1.4	369	5.3	168	2.4	760	10.8
Public	4,508	65.7	86	1.9	294	6.5	100	2.2	478	10.6
Medicaid ⁵	3,716	54.2	70	1.9	254	6.8	69	1.9	378	10.2
Other Public ⁶	792	11.5	16	2.0	40	5.1	31	3.9	100	12.6
Private ⁷	2,245	32.7	10	0.4	62	2.8	59	2.6	248	11.0
Hispanic	12,315	100.0	403	3.3	1,296	10.5	173	1.4	1,009	8.2
Public	8,997	74.7	355	3.9	1,108	12.3	102	1.1	692	7.7
Medicaid ⁵	7,726	64.1	310	4.0	983	12.7	93	1.2	620	8.0
Other Public ⁶	1,271	10.5	45	3.5	125	9.8	9	0.7	72	5.7
Private ⁷	2,958	24.6	36	1.2	137	4.6	53	1.8	250	8.5
Asian	6,220	100.0	16	0.3	67	1.1	70	1.1	494	7.9
Public	1,722	27.9	13	0.8	54	3.1	24	1.4	148	8.6
Medicaid ⁵	1,524	24.7	13	0.9	53	3.5	19	1.2	126	8.3
Other Public ⁶	198	3.2	0	0.0	1	0.5	5	2.5	22	11.1
Private ⁷	4,388	71.2	3	0.1	12	0.3	40	0.9	329	7.5
Other⁹	756	100.0	11	1.5	32	4.2	9	1.2	54	7.1
Public	408	57.2	7	1.7	23	5.6	-- ⁸	-- ⁸	20	4.9
Medicaid ⁵	341	47.8	7	2.1	22	6.5	-- ⁸	-- ⁸	19	5.6
Other Public ⁶	67	9.4	0	0.0	-- ⁸	-- ⁸	0	0.0	-- ⁸	-- ⁸
Private ⁷	288	40.4	-- ⁸	-- ⁸	6	2.1	-- ⁸	-- ⁸	22	7.6

Table 16 (cont'd). Birth Characteristics by Race/Hispanic Ethnicity and Source of Prenatal Care Payment, Massachusetts: 2013

Race/Ethnicity and Payment Source	Prenatal Care									
	Adequate ¹⁰		Began 1st Trimester		Cesarean Delivery		Breastfeeding ¹¹		Smoking ¹²	
	n	%	n	%	n	%	n	%	n	%
STATE TOTAL⁴	48,811	84.5	55,829	82.5	22,508	31.5	58,922	84.6	4,724	6.8
Public	18,376	77.4	19,024	73.4	8,069	29.8	20,654	76.9	3,526	13.6
Medicaid ⁵	15,652	77.9	16,054	73.4	6,836	30.0	17,200	76.1	3,075	14.0
Other Public ⁶	2,724	74.7	2,970	73.5	1,233	28.8	3,454	81.2	451	11.2
Private ⁷	29,463	90.5	35,879	89.2	13,802	32.7	37,507	89.6	1,051	2.6
White non-Hispanic	30,743	87.2	36,519	86.0	14,197	32.0	36,184	84.1	3,728	8.6
Public	7,675	78.9	8,241	75.8	3,415	30.6	7,822	70.7	2,686	24.8
Medicaid ⁵	6,443	79.3	6,834	75.7	2,863	30.9	6,363	69.3	2,332	26.0
Other Public ⁶	1,232	76.6	1,407	76.3	552	29.1	1,459	77.4	354	19.3
Private ⁷	22,282	91.2	27,521	90.4	10,406	32.6	28,137	88.9	924	2.9
Black non-Hispanic	4,449	75.5	4,596	72.0	2,394	34.2	5,963	86.4	303	4.5
Public	2,804	71.5	2,812	67.3	1,464	32.5	3,758	84.3	263	6.0
Medicaid ⁵	2,350	72.8	2,327	67.6	1,213	32.7	3,086	83.9	223	6.2
Other Public ⁶	454	65.9	485	65.8	251	31.7	672	85.8	40	5.3
Private ⁷	1,601	86.1	1,736	83.5	848	37.9	2,025	91.4	30	1.4
Hispanic	8,399	80.3	8,805	76.6	3,622	29.4	10,112	83.2	544	4.6
Public	6,172	78.1	6,306	74.0	2,557	28.4	7,207	80.7	477	5.5
Medicaid ⁵	5,346	78.1	5,447	73.9	2,207	28.6	6,165	80.5	428	5.7
Other Public ⁶	826	78.1	859	74.4	350	27.5	1,042	82.4	49	4.2
Private ⁷	2,153	89.0	2,440	86.1	962	32.6	2,654	90.6	50	1.7
Asian	4,255	86.5	4,903	82.8	1,820	29.3	5,430	88.7	84	1.4
Public	1,285	81.4	1,230	73.5	424	24.6	1,313	77.2	51	3.0
Medicaid ⁵	1,147	81.8	1,089	73.4	374	24.5	1,136	75.4	50	3.4
Other Public ⁶	138	78.0	141	73.8	50	25.3	177	91.2	-- ⁸	-- ⁸
Private ⁷	2,930	89.8	3,636	87.2	1,355	30.9	4,058	93.2	33	0.8
Other⁹	503	76.4	515	71.9	239	31.6	599	83.0	62	8.7
Public	267	72.2	265	67.3	122	29.9	327	80.5	47	12.2
Medicaid ⁵	229	74.4	220	66.5	103	30.2	271	79.9	40	12.4
Other Public ⁶	38	61.3	45	71.4	19	28.4	56	83.6	7	11.3
Private ⁷	215	85.7	236	83.7	91	31.6	246	86.6	13	4.7

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the "Births" column, percentages are based on race/ethnicity category totals (in column). For all other characteristics, percentages are based on the total number of births for the race/ethnicity by payment source for the row. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low Birthweight: less than 2,500 grams or 5.5 pounds. 4. Total births do not equal Public + Private because Workers' Compensation, self-paid, and other are in the state total but not shown in the table. 5. Medicaid/MassHealth. 6. Other Public: CommonHealth, Healthy Start, Medicare, other government programs, and free care. 7. Private: commercial indemnity plans or commercial managed care organizations (HMO, PPO, IPP, or IPA). It does not include Self-Paid/Other. 8. Calculations based on values of 1-4 are excluded. 9. Other: Mothers who designated their race as American Indian or "Other." 10. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 11. Infant was being breastfed at time of discharge. 12. Mother reported smoking during pregnancy.

Table 17. Cesarean Deliveries and Vaginal Births after Cesarean (VBACs) by Licensed Maternity Facility, All Births, Massachusetts: 2013

Facility ¹	Occurrence Births ²	Total Cesareans		Primary Cesareans ²		Repeat Cesareans ²		VBACs ²	
		N	% ^{3,4}	N	% ^{3,5}	N	% ^{3,6}	N	% ⁷
State Total	72,188	22,745	31.6	12,886	21.2	9,859	88.2	1,313	11.8
Anna Jaques Hospital	702	211	30.1	118	20.3	93	77.5	27	22.5
Baystate Franklin Medical Center	472	118	25.0	85	20.0	33	68.8	15	31.3
Baystate Medical Center	4,100	1,362	33.2	803	23.4	559	83.8	108	16.2
Berkshire Medical Center	611	142	23.2	74	14.1	68	77.3	20	22.7
Beth Israel Deaconess Medical Center	4,873	1,586	32.6	965	23.4	621	83.5	123	16.5
Beverly Hospital	2,118	683	32.2	383	21.3	300	92.9	23	7.1
Boston Medical Center	2,524	740	29.3	432	20.1	308	81.5	70	18.5
Brigham and Women's Hospital	7,783	2,525	32.8	1,526	23.0	999	93.5	69	6.5
Brockton Hospital	973	315	32.4	155	19.6	160	87.4	23	12.6
Cambridge Hospital	1,124	265	23.6	136	14.3	129	75.4	42	24.6
Cape Cod Hospital	774	245	31.7	148	22.1	97	92.4	8	7.6
Charlton Memorial Hospital	1,505	536	35.6	289	23.0	247	99.6	1	-- ⁸
Cooley Dickinson Hospital	817	226	27.7	129	18.2	97	88.2	13	11.8
Emerson Hospital	1,129	329	29.1	168	18.1	161	80.9	38	19.1
Fairview Hospital	136	32	23.5	19	15.4	13	100.0	0	0.0
Falmouth Hospital	424	157	37.0	93	25.9	64	98.5	1	-- ⁸
Good Samaritan Medical Center	993	426	42.9	227	28.8	199	97.1	6	2.9
Harrington Memorial Hospital	293	82	28.0	35	14.2	47	100.0	0	0.0
Healthalliance Hospital	925	242	26.2	131	16.2	111	96.5	4	-- ⁸
Heywood Hospital	436	76	17.4	50	12.3	26	83.9	5	16.1
Holy Family Hospital and Medical Center	980	420	42.9	251	31.1	169	97.7	4	-- ⁸
Holyoke Medical Center	439	112	25.6	59	16.2	53	71.6	21	28.4
Jordan Hospital	624	178	28.5	107	20.0	71	79.8	18	20.2
Lawrence General Hospital	1,514	465	30.7	185	15.1	280	96.9	9	3.1
Lowell General Hospital	2,273	666	29.3	354	18.4	312	88.1	42	11.9
Martha's Vineyard Hospital	144	36	25.0	20	15.6	16	100.0	0	0.0
Massachusetts General Hospital	3,727	1,147	30.8	740	23.1	407	78.0	115	22.0
Melrose-Wakefield Hospital	982	354	36.0	187	22.9	167	100.0	0	0.0
Mercy Medical Center	1,253	349	27.9	216	19.6	133	88.7	17	11.3
Metro West Medical Center	845	314	37.2	140	21.3	174	93.0	13	7.0
Milford Regional Medical Center	893	289	32.4	136	18.8	153	90.5	16	9.5
Morton Hospital	382	130	34.0	72	22.2	58	100.0	0	0.0
Mt. Auburn Hospital	2,563	559	21.8	344	15.2	215	72.9	80	27.1

Table 17. Cesarean Deliveries and Vaginal Births after Cesarean (VBACs) by Licensed Maternity Facility, All Births, Massachusetts: 2013

Facility ¹	Occurrence Births ²	Total Cesareans		Primary Cesareans ²		Repeat Cesareans ²		VBACs ²	
		N	% ^{3,4}	N	% ^{3,5}	N	% ^{3,6}	N	% ⁷
Nantucket Cottage Hospital	118	31	26.3	21	19.4	10	100.0	0	0.0
Newton-Wellesley Hospital	4,189	1,341	32.0	757	21.2	584	95.0	31	5.0
North Adams Regional Hospital	238	75	31.5	36	18.2	39	97.5	1	-- ⁸
North Shore Medical Center - Salem Hospital	1,344	417	31.0	224	19.8	193	91.0	19	9.0
Norwood Hospital	419	111	26.5	55	15.6	56	83.6	11	16.4
Saint Vincent Hospital	1,906	612	32.1	354	22.3	258	81.4	59	18.6
South Shore Hospital	3,339	1,311	39.3	740	27.3	571	91.4	54	8.6
St. Elizabeth's Medical Center	901	305	33.9	183	24.2	122	83.6	24	16.4
St. Luke's Hospital	1,426	510	35.8	228	19.9	282	99.6	1	-- ⁸
Sturdy Memorial Hospital	729	245	33.6	125	20.9	120	91.6	11	8.4
Tobey Hospital	480	104	21.7	55	12.8	49	100.0	0	0.0
Tufts Medical Center	1,174	495	42.2	319	33.1	176	83.4	35	16.6
Umass Memorial Medical Center	3,958	1,146	29.0	600	18.1	546	84.5	100	15.5
Winchester Hospital	1,927	724	37.6	412	25.9	312	92.9	24	7.1

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest

1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth.

2. The percentages provided in this table are based on occurrence births, and may differ from data that are based on resident births presented elsewhere in this book. 3. The percentage of Cesarean births reported is not adjusted for risk factors such as mother's age, birthweight, or complications of labor and delivery, which would influence the number of procedures in a particular facility. Caution should be used when comparing unadjusted percentages. 4. Percentage of total Cesarean = (total Cesarean births/all births) x 100. 5. Percentage primary Cesarean = (primary Cesarean / (all births-repeat Cesarean - VBACs-unknown method of delivery)) x 100. 6. Percentage repeat Cesarean = (repeat Cesarean / (repeat Cesarean + VBACs)) x100. 7. Percentage VBACs= (VBAC deliveries/ (repeat Cesarean + VBAC)) x 100. 8. Calculations based on values of 1-4 are excluded.

**Table 18. Birth Characteristics: Occurrence and Resident Births,
Massachusetts Municipalities: 2013**

Community	Occurrence Births ¹	Resident Births ²			
		Number of births	Low Birthweight (Less than 2,500 grams (5.5 lbs.))	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
STATE TOTAL	72,188	71,618	5,495	6,300	2,732
Abington	0	190	13	21	--
Acton	0	139	16	16	--
Acushnet	1	73	--	9	--
Adams	2	68	5	--	--
Agawam	0	248	11	16	11
Alford	0	3	0	0	--
Amesbury	0	160	11	12	--
Amherst	2	149	7	10	--
Andover	4	249	18	26	--
Arlington	2	612	45	48	--
Ashburnham	0	39	5	--	--
Ashby	0	21	--	--	--
Ashfield	3	10	0	0	--
Ashland	2	221	18	22	0
Athol	0	108	10	11	9
Attleboro	731	455	38	41	16
Auburn	0	144	--	7	0
Avon	0	44	--	5	--
Ayer	2	109	9	13	--
Barnstable	778	396	33	42	11
Barre	0	45	--	--	--
Becket	0	23	--	--	--
Bedford	1	131	10	15	0
Belchertown	2	128	7	10	--
Bellingham	2	177	8	8	--
Belmont	2	279	15	24	--
Berkley	1	62	--	--	0
Berlin	0	25	--	0	0
Bernardston	0	15	--	--	0
Beverly	2,238	384	26	32	11
Billerica	0	416	30	38	10
Blackstone	2	84	7	7	--
Blandford	0	10	0	0	0
Bolton	0	38	--	--	0
Boston	21,032	7,834	686	723	318
Bourne	3	145	15	18	--
Boxborough	0	41	--	--	--
Boxford	1	41	--	--	0
Boylston	0	27	--	--	0
Braintree	2	410	34	37	5
Brewster	2	47	--	5	0
Bridgewater	0	174	10	12	5
Brimfield	0	26	--	0	--
Brockton	1,971	1,492	127	147	96
Brookfield	0	26	--	--	--
Brookline	1	718	54	54	--
Buckland	0	14	0	0	--

**Table 18. Birth Characteristics: Occurrence and Resident Births,
Massachusetts Municipalities: 2013**

Community	Occurrence Births ¹	Resident Births ²			
		Number of births	Low Birthweight (Less than 2,500 grams (5.5 lbs.))	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
Burlington	0	306	21	28	--
Cambridge	3,839	1,284	102	87	8
Canton	4	221	12	15	--
Carlisle	0	29	5	--	0
Carver	0	108	9	8	--
Charlemont	0	14	--	--	--
Charlton	4	120	8	13	--
Chatham	2	30	0	0	0
Chelmsford	1	342	36	40	5
Chelsea	0	655	58	63	55
Cheshire	0	29	0	--	--
Chester	0	9	--	--	--
Chesterfield	0	13	--	--	--
Chicopee	2	627	47	50	44
Chilmark	0	9	--	--	0
Clarksburg	1	13	--	5	0
Clinton	2	174	17	16	6
Cohasset	0	63	--	6	0
Colrain	0	13	--	--	--
Concord	1,130	128	11	12	0
Conway	0	8	0	0	--
Cummington	0	4	--	--	0
Dalton	0	51	6	6	--
Danvers	2	261	18	19	--
Dartmouth	0	184	11	20	5
Dedham	3	270	18	21	--
Deerfield	1	32	--	--	--
Dennis	1	82	0	10	--
Dighton	1	63	--	--	--
Douglas	1	76	0	5	--
Dover	2	27	--	--	0
Dracut	1	340	23	29	5
Dudley	1	100	9	12	--
Dunstable	0	13	--	5	0
Duxbury	0	84	--	6	0
East Bridgewater	0	119	12	12	--
East Brookfield	0	13	--	0	0
East Longmeadow	0	105	9	11	0
Eastham	1	23	0	--	0
Easthampton	0	136	6	8	--
Easton	0	192	11	21	--
Edgartown	0	42	0	--	0
Egremont	1	3	--	--	--
Erving	0	10	0	--	0
Essex	0	26	--	--	0
Everett	1	636	56	60	25
Fairhaven	1	123	11	13	--
Fall River	1,508	1,067	95	86	89
Falmouth	426	222	18	22	9
Fitchburg	3	476	48	49	38
Florida	0	5	0	--	0

**Table 18. Birth Characteristics: Occurrence and Resident Births,
Massachusetts Municipalities: 2013**

Community	Occurrence Births ¹	Resident Births ²			
		Number of births	Low Birthweight (Less than 2,500 grams (5.5 lbs.))	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
Foxborough	0	158	9	12	5
Framingham	852	875	64	82	32
Franklin	2	250	21	25	7
Freetown	0	54	--	5	--
Gardner	437	216	20	19	10
Gay Head	0	4	0	0	0
Georgetown	1	87	8	11	--
Gill	0	11	0	--	--
Gloucester	1	253	13	14	--
Goshen	1	9	0	0	0
Gosnold	0	0	0	0	0
Grafton	1	199	15	15	--
Granby	2	58	10	6	--
Granville	0	9	0	--	0
Great Barrington	137	42	7	--	0
Greenfield	475	187	7	7	11
Groton	1	85	--	--	--
Groveland	0	62	--	--	--
Hadley	1	34	--	--	0
Halifax	0	69	--	5	--
Hamilton	0	87	6	5	0
Hampden	0	29	--	0	--
Hancock	0	4	0	--	0
Hanover	1	126	10	13	0
Hanson	0	100	10	10	--
Hardwick	0	22	--	--	--
Harvard	0	19	--	--	0
Harwich	0	82	--	--	--
Hatfield	1	21	0	0	0
Haverhill	4	800	82	98	40
Hawley	0	2	0	0	--
Heath	0	4	0	0	0
Hingham	0	223	--	5	0
Hinsdale	0	17	0	0	--
Holbrook	0	136	7	12	6
Holden	5	165	10	17	--
Holland	0	19	--	--	--
Holliston	1	112	14	15	0
Holyoke	442	607	47	59	70
Hopedale	1	53	--	--	--
Hopkinton	0	118	8	10	0
Hubbardston	0	20	0	--	--
Hudson	1	191	9	14	--
Hull	1	72	--	5	--
Huntington	0	21	--	--	--
Ipswich	0	84	--	--	--
Kingston	1	120	13	18	--
Lakeville	0	96	--	5	0
Lancaster	4	56	0	0	--
Lanesborough	0	17	--	--	--
Lawrence	1,517	1,308	124	131	139

**Table 18. Birth Characteristics: Occurrence and Resident Births,
Massachusetts Municipalities: 2013**

Community	Occurrence Births ¹	Resident Births ²			
		Number of births	Low Birthweight (Less than 2,500 grams (5.5 lbs.))	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
Lee	0	39	--	5	--
Leicester	0	93	8	10	--
Lenox	0	15	--	--	0
Leominster	926	485	39	50	30
Leverett	1	8	0	0	0
Lexington	1	225	11	12	--
Leyden	0	3	0	0	0
Lincoln	1	76	5	5	--
Littleton	0	81	--	8	0
Longmeadow	1	99	--	6	--
Lowell	2,281	1,623	136	148	106
Ludlow	0	147	10	13	5
Lunenburg	1	101	9	13	5
Lynn	7	1,455	108	121	106
Lynnfield	0	112	9	14	0
Malden	2	837	67	79	11
Manchester	0	39	--	--	0
Mansfield	1	198	13	18	--
Marblehead	0	145	22	20	--
Marion	0	37	5	6	--
Marlborough	4	504	41	40	22
Marshfield	3	188	11	16	--
Mashpee	0	101	9	10	--
Mattapoisett	0	37	--	5	--
Maynard	2	131	14	17	--
Medfield	0	98	5	--	0
Medford	4	696	47	59	7
Medway	2	134	6	13	--
Melrose	983	337	17	31	--
Mendon	2	41	--	--	0
Merrimac	0	62	--	5	--
Methuen	981	598	33	38	22
Middleborough	1	233	13	15	10
Middlefield	0	4	0	0	0
Middleton	0	54	--	0	0
Milford	895	335	26	27	10
Millbury	1	130	9	16	--
Millis	0	51	--	--	--
Millville	2	17	--	--	0
Milton	2	289	22	30	--
Monroe	0	2	0	0	0
Monson	2	50	0	--	--
Montague	2	82	6	9	5
Monterey	0	3	0	--	0
Montgomery	0	3	0	0	0
Mount Washington	0	0	0	0	0
Nahant	0	15	--	0	0
Nantucket	120	131	--	--	--
Natick	2	429	30	46	--
Needham	1	296	18	20	--
New Ashford	0	1	0	0	0

**Table 18. Birth Characteristics: Occurrence and Resident Births,
Massachusetts Municipalities: 2013**

Community	Occurrence Births ¹	Resident Births ²			
		Number of births	Low Birthweight (Less than 2,500 grams (5.5 lbs.))	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
New Bedford	1,431	1,306	117	135	126
New Braintree	0	8	--	--	0
New Marlborough	0	6	--	--	0
New Salem	0	11	0	--	--
Newbury	0	50	5	7	--
Newburyport	702	166	9	13	--
Newton	4,196	801	59	69	5
Norfolk	1	72	--	6	0
North Adams	238	132	6	13	15
North Andover	1	298	25	27	0
North Attleboro	0	286	24	27	9
North Brookfield	1	45	--	--	--
North Reading	0	154	8	12	0
Northampton	824	194	8	13	--
Northborough	1	138	7	7	0
Northbridge	1	147	8	9	--
Northfield	0	23	0	--	--
Norton	0	134	5	6	7
Norwell	0	92	7	5	0
Norwood	422	379	31	35	5
Oak Bluffs	145	49	--	5	--
Oakham	0	14	0	--	--
Orange	2	61	5	7	--
Orleans	0	26	0	--	0
Otis	0	8	0	0	0
Oxford	0	140	11	10	--
Palmer	2	123	8	--	6
Paxton	0	24	--	--	0
Peabody	0	477	32	42	11
Pelham	0	14	0	0	--
Pembroke	1	133	0	--	--
Pepperell	2	96	--	5	--
Peru	0	8	0	--	--
Petersham	1	9	0	0	0
Phillipston	0	18	--	--	--
Pittsfield	615	446	33	32	37
Plainfield	0	3	0	0	0
Plainville	0	75	8	9	--
Plymouth	632	508	46	54	16
Plympton	0	27	6	--	--
Princeton	2	21	--	--	0
Provincetown	0	11	0	0	0
Quincy	6	1,251	80	92	16
Randolph	4	352	28	27	12
Raynham	0	142	6	9	--
Reading	0	269	20	20	0
Rehoboth	0	88	6	8	--
Revere	0	761	64	61	37
Richmond	2	8	0	0	0
Rochester	0	40	--	5	0
Rockland	1	221	14	15	10

**Table 18. Birth Characteristics: Occurrence and Resident Births,
Massachusetts Municipalities: 2013**

Community	Occurrence Births ¹	Resident Births ²			
		Number of births	Low Birthweight (Less than 2,500 grams (5.5 lbs.))	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
Rockport	0	41	5	6	--
Rowe	0	2	0	0	0
Rowley	0	47	--	6	--
Royalston	0	6	--	0	--
Russell	0	11	--	--	0
Rutland	0	84	9	8	0
Salem	1,347	524	35	53	19
Salisbury	1	86	6	--	--
Sandisfield	0	10	--	0	--
Sandwich	0	122	9	9	--
Saugus	0	271	17	23	6
Savoy	0	0	0	0	0
Scituate	2	164	13	24	--
Seekonk	0	102	7	7	--
Sharon	1	143	9	13	--
Sheffield	1	30	--	--	--
Shelburne	1	13	--	--	0
Sherborn	0	26	6	7	0
Shirley	0	59	6	6	5
Shrewsbury	3	370	28	25	--
Shutesbury	4	11	0	0	0
Somerset	0	141	11	15	--
Somerville	11	964	78	75	16
South Hadley	1	148	9	11	--
Southampton	0	37	--	0	0
Southborough	0	91	--	8	0
Southbridge	294	222	21	21	25
Southwick	0	73	--	6	--
Spencer	1	123	5	6	--
Springfield	5,374	2,194	204	230	289
Sterling	0	47	--	6	0
Stockbridge	0	15	--	--	0
Stoneham	0	247	23	21	--
Stoughton	1	290	20	24	6
Stow	2	58	--	--	0
Sturbridge	1	88	5	6	--
Sudbury	0	149	7	16	--
Sunderland	0	27	--	--	0
Sutton	0	68	--	7	--
Swampscott	0	126	8	12	0
Swansea	2	114	11	12	--
Taunton	384	637	47	46	29
Templeton	2	70	13	11	--
Tewksbury	1	273	19	20	--
Tisbury	0	39	--	--	--
Tolland	0	1	0	0	0
Topsfield	0	42	--	--	0
Townsend	1	63	--	5	--
Truro	0	13	--	--	0
Tyngsborough	0	119	11	13	--
Tyringham	0	2	0	0	0

**Table 18. Birth Characteristics: Occurrence and Resident Births,
Massachusetts Municipalities: 2013**

Community	Occurrence Births ¹	Resident Births ²			
		Number of births	Low Birthweight (Less than 2,500 grams (5.5 lbs.))	Preterm (<37 weeks gestation)	Teen Births (15-19 years)
Upton	1	54	5	5	--
Uxbridge	4	132	15	16	--
Wakefield	2	296	29	33	--
Wales	0	11	0	--	--
Walpole	3	265	15	17	--
Waltham	4	782	62	66	16
Ware	1	94	8	6	6
Wareham	480	216	16	18	10
Warren	0	47	--	--	--
Warwick	0	3	0	0	0
Washington	0	5	0	0	--
Watertown	3	494	38	45	--
Wayland	1	120	6	9	0
Webster	2	189	19	16	14
Wellesley	1	209	18	20	0
Wellfleet	1	20	0	--	--
Wendell	0	10	--	--	0
Wenham	0	23	--	--	0
West Boylston	1	71	6	8	--
West Bridgewater	2	61	6	10	0
West Brookfield	0	23	0	0	--
West Newbury	0	23	--	--	0
West Springfield	0	352	35	34	16
West Stockbridge	0	10	0	0	0
West Tisbury	0	26	0	0	--
Westborough	0	225	24	24	--
Westfield	3	439	24	31	16
Westford	1	152	9	15	0
Westhampton	1	13	0	0	0
Westminster	0	63	7	5	0
Weston	1	55	9	9	0
Westport	0	111	5	5	--
Westwood	0	111	15	13	0
Weymouth	3,343	630	53	64	9
Whately	0	7	--	0	0
Whitman	0	146	10	13	--
Wilbraham	1	95	9	9	--
Williamsburg	1	23	--	--	--
Williamstown	0	35	0	--	--
Wilmington	1	242	16	16	--
Winchendon	0	83	5	--	5
Winchester	1,928	215	9	11	--
Windsor	0	4	0	0	0
Winthrop	2	185	8	9	--
Woburn	2	514	46	48	8
Worcester	5,882	2,499	201	224	179
Worthington	1	7	0	--	0
Wrentham	0	83	8	10	--
Yarmouth	0	184	15	21	5

1. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. See Glossary for more details. 2. Births to mothers who report their usual place of residence as a particular geographical place (state, or city/town).

Table 18. Birth Characteristics: Occurrence and Resident Births, Massachusetts Municipalities: 2013					
Community	Occurrence Births ¹	Resident Births ²			
		Number of births	Low Birthweight (Less than 2,500 grams (5.5 lbs.))	Preterm (37 weeks gestation)	Teen Births (15-19 years)
-- Due to small numbers (n=1-4), exact count not provided.					

Table 19. Mothers¹ Who Used Infertility Treatments, Massachusetts: 2013

	Assisted Reproductive Technology (ART) with or without Artificial Insemination and/or Fertility Drugs ²		Artificial Insemination with or without Fertility Drugs ³		Fertility Enhancing Drugs Only ⁴	
	N	% ⁵	N	% ⁵	N	% ⁵
State total	1,981	66.8%	496	16.7%	487	16.4%
Maternal Demographics						
Race/Hispanic Ethnicity	N	% ⁶	N	% ⁶	N	% ⁶
White non-Hispanic	1,552	79.0%	421	85.7%	384	71.5%
Black non-Hispanic	85	4.3%	13	2.6%	20	3.7%
Asian	205	10.4%	31	6.3%	45	8.4%
Hispanic	103	5.2%	25	5.1%	85	15.8%
Other	19	1.0%	-- ¹⁰	-- ¹⁰	-- ¹⁰	-- ¹⁰
Birthplace						
US States / D.C./US Terr.	1,532	77.3%	412	83.1%	378	77.6%
Non-US-born	449	22.7%	84	16.9%	109	22.4%
Prenatal care funding						
Public	74	3.7%	33	6.7%	64	13.2%
Private, other	1,903	96.3%	462	93.3%	421	86.8%
Age						
20-29	148	7.5%	59	11.9%	105	21.6%
30-34	679	34.3%	222	44.8%	226	46.4%
35-39	728	36.7%	164	33.1%	122	25.1%
40+	426	21.5%	51	10.3%	34	7.0%
Pregnancy-Related Factors						
Adequacy of Prenatal Care⁷						
Adequate Total ⁸	1,717	92.8%	410	94.5%	394	93.6%
Adequate Intensive	1,108	59.9%	240	55.3%	223	53.0%
Adequate Basic	609	32.9%	170	39.2%	171	40.6%
Intermediate	62	3.3%	9	2.1%	15	3.6%
Inadequate/None	72	3.9%	15	3.5%	12	2.9%
Parity⁹						
1	1,282	64.7%	365	73.6%	305	62.6%
2	550	27.8%	114	23.0%	144	29.6%
3+	149	7.5%	17	3.4%	38	7.8%
Birth Outcomes						
Gestational age						
< 28 weeks (extremely preterm)	34	1.7%	8	1.6%	-- ¹⁰	-- ¹⁰
< 37 weeks (preterm) ¹¹	454	22.9%	56	11.3%	53	10.9%
37+	1,527	77.1%	440	88.7%	434	89.1%
Plurality						
Singleton	1,509	76.2%	442	89.1%	435	89.3%
Multiple birth	472	23.8%	54	10.9%	52	10.7%

NOTE: In 2013, questions about fertility assistance were asked on both the hospital and mother's worksheets, data on this table combines both sources. While asking the mothers has increased reporting, it is known that these treatments are still underreported; as such, these numbers should be interpreted with caution. All percentages are calculated based only on mothers with known values for the characteristic(s) of interest, unless otherwise stated. Often women use more than one method of treatment, and the categories presented are mutually exclusive.

1. The unit of analysis for this table is unique mothers, not births. 2. This category includes all women who used ART (typically IVF) and those who used any additional treatments. 3. This category includes women who used artificial insemination (including intrauterine insemination) and those who used fertility drugs in addition. 4. This category includes women who only used fertility drugs. 5. For state total row, percentages are based on total births where infertility treatment was present. 6. Percent is based on state total of the treatment methods. 7. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. Does not include data from Newton Wellesley, Saint Vincent and Winchester hospitals because of reporting problems. 8. Adequate Total = Adequate Basic + Adequate Intensive. 9. Number of live births including the current birth. 10. Numbers and calculations based on 1-4 events are excluded. 11. Categories are not mutually exclusive so percent will add to more than 100%.

Technical Notes

Data Cautions

Limitations of small numbers:

Cells in some tables in this publication, and particularly those tables specific to individual cities and towns, contain small numbers. Rates and proportions based on fewer than five observations are suppressed, and trends based upon small numbers should be interpreted cautiously.

Differences with previously published data

Numbers and rates in this publication may differ from those in previous reports because of updated birth, or release of the most up-to-date population estimates for a given year (see Population Denominators for details on population files).

Self-reported data

Many statistics reported in this publication, such as maternal smoking, education, and race/ethnicity are *self-reported*, and are subject to the usual limitations of this type of information.

Changes in the Collection of Race/Ethnicity Information

The 2003 revision of the Standard Certificate of Live Birth allows the reporting of more than one race (multiple races) for each parent in accordance with the revised standards issued by the Office of Management and Budget (OMB) in 1997.

The revised standards incorporated two major changes designed to reflect the changing racial and ethnic profile of the United States. First, the revision increased from five to twelve the minimum set of categories to be used for identification of race. The twelve categories for race specified in the 1997 standards are: American Indian or Alaska Native, Asian, Black, Guamanian or Chamorro, Hispanic/Latino/Black, Hispanic/Latino/White, Hispanic/Latino/Other, Native Hawaiian, Samoan, White, Other Pacific Islander and Other. The revised standards called for reporting of Asians separately from Native Hawaiians, Samoan or Other Pacific Islanders.

The revised standards require federal data collection programs to allow respondents to select *one or more race categories*. In order to provide uniformity and comparability of the data during the transition period, before multiple-race data are available for all reporting areas, it is necessary to “bridge” the responses of those who reported more than one race to a single-race. The method used to bridge responses for those who report more than one race to a single race is based on a procedure whereby multiple races are assigned to the smallest minority group first (i.e. Asian and White becomes Asian or Black and Native American becomes Native American). All multiple races that include Hispanic will be assigned as Hispanic and this group also includes all respondents who reported Hispanic ethnicities as well.

The revised standards also require federal data collection programs to allow respondents to select *one or more ancestry categories*. The method used to bridge responses for those who report more than one ancestry is based on a procedure whereby multiple ancestries are assigned to each of the ancestries listed.

The following table is from the Parent Worksheet for the birth certificate, which is the self-reported information we use to report on mother's race and ancestry.

2003 revision

Mother/Parent Race

Please indicate your race(s). *You may choose more than one.*

<input type="checkbox"/> American Indian/Alaska Native (specify tribal nation): _____ <input type="checkbox"/> Asian <input type="checkbox"/> Black <input type="checkbox"/> Guamanian or Chamorro <input type="checkbox"/> Hispanic/Latina/Black <input type="checkbox"/> Hispanic/Latina/White	<input type="checkbox"/> Hispanic/Latina/Other (specify): _____ <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Samoan <input type="checkbox"/> White <input type="checkbox"/> Other Pacific Islander (specify): _____ <input type="checkbox"/> Other race not listed (specify): _____
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Mother/Parent Ethnicity

Please indicate your ethnic background(s). *You may choose more than one.*

<input type="checkbox"/> African (specify): _____ <input type="checkbox"/> African-American <input type="checkbox"/> American <input type="checkbox"/> Asian Indian <input type="checkbox"/> Brazilian <input type="checkbox"/> Cambodian <input type="checkbox"/> Cape Verdean <input type="checkbox"/> Caribbean Islander (specify): _____ <input type="checkbox"/> Chinese <input type="checkbox"/> Colombian <input type="checkbox"/> Cuban <input type="checkbox"/> Dominican <input type="checkbox"/> European (specify): _____ <input type="checkbox"/> Filipino <input type="checkbox"/> Guatemalan <input type="checkbox"/> Haitian <input type="checkbox"/> Honduran	<input type="checkbox"/> Japanese <input type="checkbox"/> Korean <input type="checkbox"/> Laotian <input type="checkbox"/> Mexican, Mexican American, Chicano <input type="checkbox"/> Middle Eastern (specify): _____ <input type="checkbox"/> Native American (specify tribal nation(s)): _____ <input type="checkbox"/> Portuguese <input type="checkbox"/> Puerto Rican <input type="checkbox"/> Russian <input type="checkbox"/> Salvadoran <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other Asian (specify): _____ <input type="checkbox"/> Other Central American (specify): _____ <input type="checkbox"/> Other Pacific Islander (specify): _____ <input type="checkbox"/> Other Portuguese (specify): _____ <input type="checkbox"/> Other South American (specify): _____ <input type="checkbox"/> Other ethnicity (ies) not listed (specify): _____
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1989 revision

MOTHER'S RACE Please mark the *one* category that *best describes* the mother's race:

- ☐ White ☐ Black ☐ Asian/Pacific Islander ☐ American Indian ☐ Other (specify)

MOTHER'S ANCESTRY Please mark the *one* category that *best describes* the mother's ancestry of ethnic heritage:

HISPANIC/LATINA

- 1 ☐ Puerto Rican 7 ☐ Other Central American (specify)
2 ☐ Dominican
3 ☐ Mexican 8 ☐ Other South American (specify)
4 ☐ Cuban
5 ☐ Colombian 9 ☐ Other Hispanic/Latina (specify):
6 ☐ Salvadoran

ASIAN/PACIFIC ISLANDER

- 10 ☐ Chinese 17 ☐ Laotian
11 ☐ Vietnamese 18 ☐ Pakistani
12 ☐ Cambodian 19 ☐ Thai
13 ☐ Asian Indian 20 ☐ Hawaiian
14 ☐ Korean 21 ☐ Other Asian/Pacific Islander(specify)
15 ☐ Filipino
16 ☐ Japanese

PORTUGUESE SPEAKING

- 22 ☐ Cape Verdean 24 ☐ Other Portuguese (specify):
23 ☐ Brazilian

WEST INDIAN/CARIBBEAN ISLANDER

- 25 ☐ Haitian 28 ☐ Other West Indian/Caribbean
Islander (specify):
26 ☐ Jamaican
27 ☐ Barbadian

AFRICAN/AFRICAN AMERICAN

- 29 ☐ African-American/ Afro-American
30 ☐ Nigerian
31 ☐ Other African (specify):

MIDDLE EASTERN

- 32 ☐ Lebanese
33 ☐ Iranian
34 ☐ Israeli
35 ☐ Other Middle Eastern (specify):

AMERICAN ANCESTRY

- 36 ☐ Native American/ American Indian
(specify tribe/affiliation):
37 ☐ American

EUROPEAN and OTHER ancestries

- 38 ☐ European (specify):
39 ☐ Other (specify):

Table A1. 2013 Massachusetts Population Estimates by Age Group, Gender, Race and Hispanic Ethnicity (mutually exclusive)

Age Group	Total ¹	White Non-Hispanic	Black Non-Hispanic	Native American Non-Hispanic	Asian Non-Hispanic	Hispanic ²
Female						
0 to 4	178,502	114,009	16,845	440	13,397	33,811
5 to 9	185,822	123,884	17,013	459	13,507	30,959
10 to 14	195,207	135,844	16,892	496	12,709	29,266
15 to 19	226,727	160,468	19,487	579	14,910	31,283
20 to 24	241,252	166,439	21,421	621	19,355	33,416
25 to 29	238,505	166,702	18,684	548	22,280	30,291
30 to 34	221,759	152,703	17,603	490	21,378	29,585
35 to 39	202,620	140,741	16,473	410	18,413	26,583
40 to 44	227,816	169,073	16,585	492	17,551	24,115
45 to 49	249,290	195,409	16,782	594	14,361	22,144
50+	1,280,508	1,099,548	65,790	2,483	48,458	64,229
All Females	3,448,008	2,624,820	243,575	7,612	216,319	355,682
Male						
0 to 4	187,044	119,408	17,920	461	13,756	35,499
5 to 9	194,294	129,832	17,991	493	13,601	32,377
10 to 14	203,156	142,672	17,474	499	12,289	30,222
15 to 19	230,452	163,621	19,839	594	13,712	32,686
20 to 24	242,361	166,387	22,134	694	17,981	35,165
25 to 29	236,056	165,439	18,476	565	19,797	31,779
30 to 34	216,477	150,331	16,426	462	18,943	30,315
35 to 39	195,728	137,415	15,272	376	17,081	25,584
40 to 44	216,661	162,098	15,337	509	16,322	22,395
45 to 49	237,417	187,636	15,871	583	13,149	20,178
50+	1,085,170	935,913	52,984	2,330	42,146	51,797
All Males	3,244,816	2,460,752	229,724	7,566	198,777	347,997
0 to 4	365,546	233,417	34,765	901	27,153	69,310
5 to 9	380,116	253,716	35,004	952	27,108	63,336
10 to 14	398,363	278,516	34,366	995	24,998	59,488
15 to 19	457,179	324,089	39,326	1,173	28,622	63,969
20 to 24	483,613	332,826	43,555	1,315	37,336	68,581
25 to 29	474,561	332,141	37,160	1,113	42,077	62,070
30 to 34	438,236	303,034	34,029	952	40,321	59,900
35 to 39	398,348	278,156	31,745	786	35,494	52,167
40 to 44	444,477	331,171	31,922	1,001	33,873	46,510
45 to 49	486,707	383,045	32,653	1,177	27,510	42,322
50+	2,365,678	2,035,461	118,774	4,813	90,604	116,026
State Total	6,692,824	5,085,572	473,299	15,178	415,096	703,679

1. National Center for Health Statistics. Postcensal estimates of the resident population of the United States for July 1, 2010-July 1, 2013, by year, county, single-year of age (0, 1, 2, ..., 85 years and over), bridged race, Hispanic origin, and sex (Vintage 2013). Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: http://www.cdc.gov/nchs/nvss/bridged_race.htm of July, 2013, following release by the U.S. Census Bureau of the unbridged Vintage 2013 postcensal estimates by 5-year age.

2. Persons of Hispanic ethnicity are NOT included in the race categories.

These estimates are used to calculate **statewide population based rates** published in this report.

Note to Readers

1. Data

Data on births are based on information from the Massachusetts Standard Certificate of Live Birth filed with the Registry of Vital Records and Statistics.

2. Population

We have used two population files based upon the 2010 Census for denominators in rate calculations:

- The 2013 Modified Age, Race/Ethnicity, and Sex file (MARS), which is another bridged population file produced by the National Center for Health Statistics (NCHS) and the Census Bureau Population Estimates Program was used to calculate state rates by race and Hispanic ethnicity, (e.g., teen birth rates). This file has data by single years of age, sex, race and Hispanic ethnicity in the five mutually exclusive categories used by the Department: White Non-Hispanic, Black Non-Hispanic, Asian Non-Hispanic, American Indian/Alaska Native Non-Hispanic, and Hispanic.
- The Massachusetts Department of Public Health Race Allocated Census 2010 Estimates file, which contains population estimates based upon the Census 2010 Summary File 1, was used to calculate city, town, and other substate rates. In this file, the Census 2010 race categories, “Two or more races” and “Some other race” are redistributed to the MDPH standard race categories: Non-Hispanic White, Non-Hispanic Black, Non-Hispanic Asian and Pacific Islander, and Non-Hispanic American Indian and Alaska Native. All persons in the Census 2010 Hispanic ethnicity category are counted as “Hispanic” race in the MDPH estimates. This kind of file is often referred to as a “bridged” file, that is, one that bridges the new race and ethnicity collections to the conventionally used categories. **Please note:** If the population in your community increased from 2010 to 2012, the rates listed may **overestimate** the actual rate. If the population in your community declined from 2010 to 2012, the rates given in the publication may **underestimate** the actual rate.

3. Rate, Proportion, and Number comparisons

The comparison of rates, proportions, and numbers is based on tests of statistical significance. Comparative words, for example, “higher”, “lower”, “increase”, and “decrease” are used only when the statistics being compared are statistically different (i.e., statistically significant at the $P \leq .05$ level). All statistics presented, unless stated otherwise, are based upon the number of births and not on the number of mothers. Proportions are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

4. Resident births

All data in this publication are resident data unless otherwise stated. Resident data include all events that occur to residents of the Commonwealth, wherever they occur.

5. Race and Ethnicity

In the text, the race categories, White, Black, American Indian, Asian, and Hispanic are mutually exclusive. For example, when we refer to White mothers, this means White non-Hispanic mothers. See “Technical Notes” for detailed information on the multiple-race reporting area and

methods used to bridge responses for those who report more than one race to a single race. Please note that trend data on minority groups such as Native Americans, Hispanics, Blacks, and Asians may not be comparable as these groups will show increases in the number of births solely related to the methods used for re-classification of multiple races into single race categories.

Please use caution in interpreting these numbers.

6. Adjusted Adequacy of Prenatal Care Utilization Index (APNCU)

In 2013, there were continued reporting issues for the number of prenatal visits in 3 hospitals: Newton Wellesley Hospital, Saint Vincent Hospital, and Winchester Hospital. Adjusted APCUI presents adequate prenatal care without these 3 hospitals since their data is considered to be unreliable.